

DL6000/DLM6000 Series
Digital Oscilloscope/
Mixed Signal Oscilloscope
Communication Interface

U S E R ' S M A N U A L

Thank you for purchasing the DL6000/DLM6000 Series Digital Oscilloscope/Mixed Signal Oscilloscope (DL6054/DL6104/DL6154/DLM6054/DLM6104, hereafter referred to as the DL6000/DLM6000). This Communication Interface User's Manual describes the functions and commands of the following communication interfaces.

- USB Interface
- Ethernet Interface (Optional)
- GB-IB Interface

To ensure correct use, please read this manual thoroughly before beginning operation.

After reading the manual, keep it in a convenient location for quick reference whenever a question arises during operation.

The following manuals are provided for the DL6000/DLM6000. Please read all of them.

Manual Title	Manual No.	Description
DL6000/DLM6000 Series Digital Oscilloscope/Mixed Signal Oscilloscope User's Manual	IM DLM6054-01EN	Explains all functions and procedures of the DL6000/DLM6000 series excluding the communication functions.
DL6000/DLM6000 Series Digital Oscilloscope/Mixed Signal Oscilloscope Communication Interface User's Manual (in CD)	IM DLM6054-17EN	This manual. Explains the communication interface functions of the DL6000/DLM6000 series.
DL6000/DLM6000 Series Digital Oscilloscope/Mixed Signal Oscilloscope Serial Bus Signal Triggering and Analysis Function User's Manual	IM DLM6054-51EN	Explains the optional I2C bus signal, CAN bus signal, LIN bus signal, SPI bus signal, and UART bus signal triggering and analysis features and how to use them.
DL6000/DLM6000 Series Digital Oscilloscope/Mixed Signal Oscilloscope Power Supply Analysis Function User's Manual	IM DLM6054-61EN	Explains the optional power supply analysis features and how to use them.

Notes

- You can check the firmware version of your DL6000/DLM6000 on the overview screen. For instructions on how to open the overview screen, see section 18.4 in the User's Manual IM 701331-01E.
To upgrade to the latest firmware version, go to the following Web page, and then browse to the download page.
<http://tmi.yokogawa.com/service-support/downloads/>
- The contents of this manual are subject to change without prior notice as a result of continuing improvements to the instrument's performance and functions.
- Every effort has been made in the preparation of this manual to ensure the accuracy of its contents. However, should you have any questions or find any errors, please contact your nearest YOKOGAWA dealer.
- Copying or reproducing all or any part of the contents of this manual without the permission of Yokogawa Electric Corporation is strictly prohibited.

USB Interface and Ethernet Interface

- The items below are needed on the PC to use the communication functions via the USB interface.
 - DL Series Library (TMCTL)
 - USB device driver for connecting the PC and the DL9000 series
- The items below are needed on the PC to use the communication functions via the Ethernet interface.
 - DL Series Library (TMCTL)

To download the libraries and drivers listed above, go to the following Web page, and then browse to the download page.

<http://tmi.yokogawa.com/service-support/downloads/>

Sample Programs

To download sample programs, go to the following Web page, and then browse to the download page.
<http://tmi.yokogawa.com/service-support/downloads/>

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Revisions

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How to Use This Manual

Structure of This Manual

This user's manual consists of the following sections.

Chapter 1 Overview of the USB Interface

Describes the functions and specifications of the USB interface.

Chapter 2 Overview of the Ethernet Interface (Optional)

Describes the functions and specifications of the Ethernet interface.

Chapter 3 Overview of the GP-IB Interface

Describes the functions and specifications of the GP-IB interface.

Chapter 4 Before Programming

Describes the syntax used to transmit commands.

Chapter 5 Command

Describes all the commands one by one.

Chapter 6 Status Reports

Describes the status byte, various registers, and queues.

Appendix

Describes reference material such as an ASCII character code table.

Symbols and Notations Used in This Manual

Communication Command Notation

In the detailed explanations of the communication commands in chapter 5, DLM6000-specific commands are written in blue italics.

These commands are not available on the DL6000.

Safety Markings

The following markings are used in this manual.

CAUTION

Calls attentions to actions or conditions that could cause light injury to the user or damage to the instrument or the user's data, and precautions that can be taken to prevent such occurrences.

Note

Calls attention to information that is important for proper operation of the instrument.

Notation Used in the Procedural Explanations

On pages that describe the operating procedures in chapters 1 through 3, the following notations are used to distinguish the procedures from their explanations.

Procedure

Carry out the procedure according to the step numbers. All procedures are written with inexperienced users in mind; experienced users may not need to carry out all the steps.

Explanation

This section describes the setup items and the limitations regarding the procedures.

Notation of User Controls

Operation/Soft Key Names and Menu Items Set in Boldface

Boldface type indicates the names of user-controlled operation keys on the instrument panel, and soft key items and menu items displayed on screen.

SHIFT+Panel Key

The SHIFT+Panel key means you will press the SHIFT key to turn ON the indicator of SHIFT key and then press the panel key. The menu marked in purple above the pressed key appears on the screen.

Unit

k: Denotes "1000."	Example: 100 kS/s (sample rate)
K: Denotes "1024."	Example: 720 KB (file data size)

Symbols Used in the Syntax

The following table indicates symbols that are used in the syntax mainly in chapters 4 and 5. These symbols are referred to as BNF (Backus-Naur Form) symbols. For details on the data, see pages 4-5 and 4-6.

Symbol	Meaning	Example	Example of Input
< >	Defined value	CHANnel<x> <x> = 1 to 4	CHANNEL2
{ }	Select from values given in { }	COUPling {AC DC DC50 GND}	COUPLING AC
	Exclusive OR		
[]	Can be omitted	TRIGger [:SIMPlE]:SLOPe	TRIGger:SLOPe

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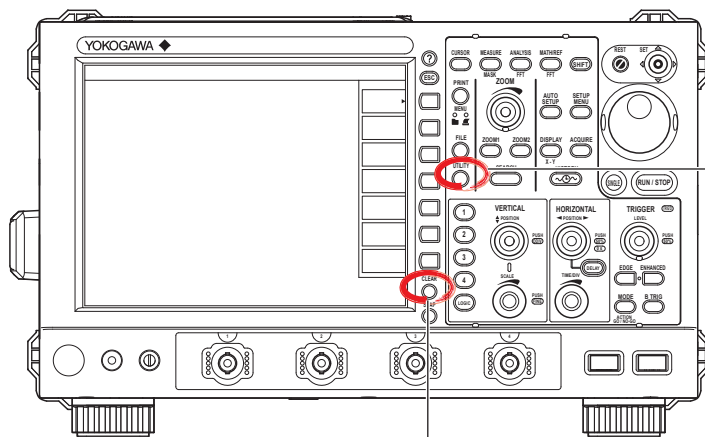
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1.1 Part Names and Functions

Front Panel

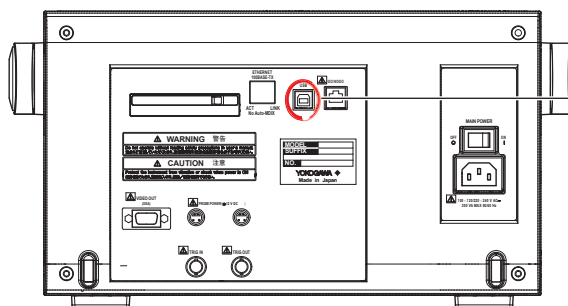


SYSTEM key
Press this key to select the USB interface.

SHIFT + CLEAR key
Press this key to clear the remote mode (controlled via communications) and enter the local mode in which key operations are enabled. However, this act is invalid if the instrument has been set to Local Lockout mode (see page 1-3) by the controller.

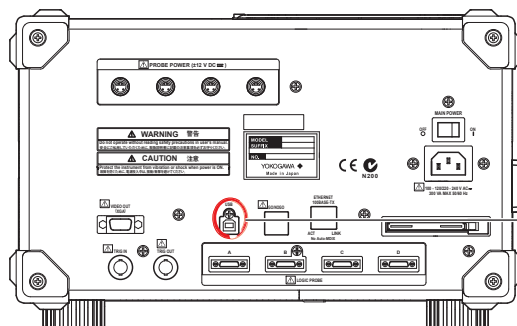
Rear Panel

DL6000



USB interface connector
Connector used to connect the DL6000/DLM6000 to the controller (such as a PC) using a USB cable.

DLM6000



USB interface connector
Connector used to connect the DL6000/DLM6000 to the controller (such as a PC) using a USB cable.

1.2 USB Interface Functions and Specifications

USB Interface Functions

Reception Function

You can specify the same settings as those specified by front panel key operations.

Receives output requests for measured and computed data, setup parameters of the panel, and error codes.

Transmission Function

Outputs measured and computed data.

Outputs panel setup parameters and the status byte.

Outputs error codes that have occurred.

USB Interface Specifications

Electrical and mechanical specifications:	Conforms to USB Rev. 2.0
Connector:	Type B connector (receptacle)
Number of ports:	1
Power supply:	Self-powered
PC system supported:	PC running Windows 2000 or Windows XP with a standard USB port (a separate device driver is needed to connect to a PC).

Data Rate

Controller:	PC (Pentium4 3.4 GHz, USB2.0) and OS (Windows XP Professional SP1)
Language used:	Visual C++

The table below lists the reference response times when outputting waveform data of analog signals.

Number of Data Points	Word Data	ASCII Data
2500	Approx. 51 ms	Approx. 0.469 s
125000	Approx. 193 ms	Approx. 22.766 s
1250000	Approx. 1606 ms	Approx. 224.890 s
2500000	Approx. 3188 ms	Approx. 451.297 s
6250000	Approx. 7841 ms	Approx. 1127.625 s

The table below lists the reference response times when outputting waveform data of logic signals.

Number of Data Points	Word Data	ASCII Data
2500	Approx. 78 ms	Approx. 0.141 s
125000	Approx. 625 ms	Approx. 3.516 s
1250000	Approx. 5547 ms	Approx. 34.531 s
2500000	Approx. 11156 ms	Approx. 69.375 s
6250000	Approx. 27812 ms	Approx. 173.266 s

Switching between Remote and Local Modes

When Switching from Local to Remote Mode

If the DL6000/DLM6000 receives a “:COMMunicate:REMOte ON” command from the PC when it is in the local mode, it switches to the remote mode.

- REMOTE is displayed in the center of the upper section of the screen.
- All keys except the **SHIFT + CLEAR** key are disabled.
- Settings entered in local mode are retained even when the DL6000/DLM6000 switches to remote mode.

When Switching from Remote to Local Mode

Pressing **SHIFT + CLEAR** in remote mode puts the instrument in local mode. However, this is void when the DL6000/DLM6000 has received a “:COMMunicate:LOCKout ON” command from the PC (local lockout condition). When the DL6000/DLM6000 receives a “:COMMunicate:REMOte OFF” command from the PC, the DL6000/DLM6000 switches to the local mode regardless of the local lock condition.

- REMOTE indication in the center of the upper section of the screen disappears.
- Key operations are enabled.
- Settings entered in remote mode are retained even when the DL6000/DLM6000 switches to local mode.

Note

The USB interface cannot be used simultaneously with another interface (Ethernet or GP-IB interface).

1.3 Connection via the USB Interface

Precautions to Be Taken When Making Connections

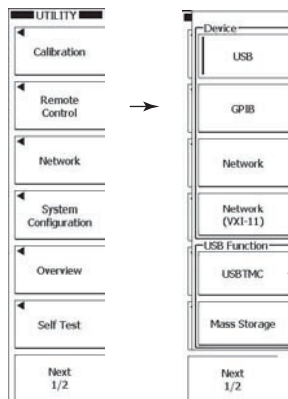
- Connect the USB cable by inserting the connector firmly into the USB connector.
- When connecting multiple devices using USB hubs, connect the DL9710L to the USB hub that is closest to the controller.
- Do not insert the USB cable into the GO/NO-GO output terminal. If you do, the instrument may malfunction.

1.4 Setting the DL6000/DLM6000 (USB)

Procedure

UTILITY_Remote Control_UBS Menu

Press **UTILITY**, the **Remote Control** soft key, and then the **USB** soft key to display the following.



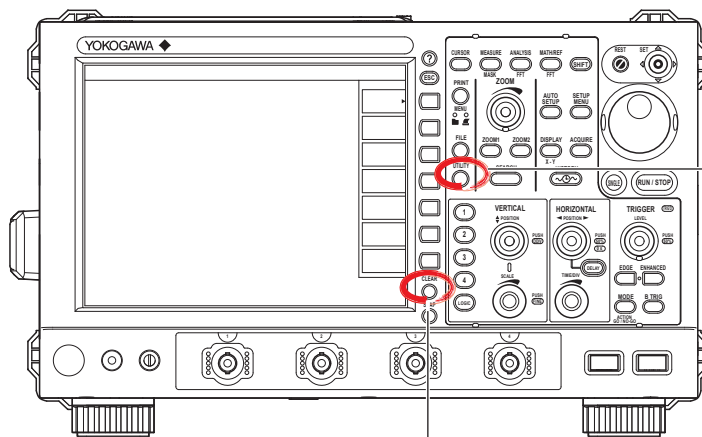
To remotely control the DL6000/DLM6000 using communication commands through the USB port, select USBTMC and then enable the setting by restarting the DL6000/DLM6000.

Note

- Only the communication interface selected by Remote Control is enabled. The DL6000/DLM6000 does not accept commands that are transmitted to other unselected communication interfaces.
- To control the DL6000/DLM6000 remotely using communication commands through the USB port, select "TMC" in the menu above, and carry out the procedure below.
 - You must restart the DL6000/DLM6000 to activate the TMC or Mass Storage setting. Wait at least 10 seconds after you turn the power switch OFF, and then turn the switch back ON.
 - Install YOKOGAWA's TMC (Text and Measurement Class) driver into your PC. To obtain YOKOGAWA's USB TMC driver, contact your nearest YOKOGAWA dealer or access the following USB driver page at our Web site and download it.
<http://www.yokogawa.com/tm/tm-softdownload.htm>
 - Only use the USB TMC driver (or software) provided by YOKOGAWA.
- You cannot use keys to perform file operations when a PC is connected to the DL6000/DLM6000 and the Mass Storage setting is enabled. You cannot use communication commands to perform file operations either. To perform file operations, you must restart the DL6000/DLM6000 after disconnecting the PC or enabling the TMC setting.

2.1 Part Names and Functions

Front Panel

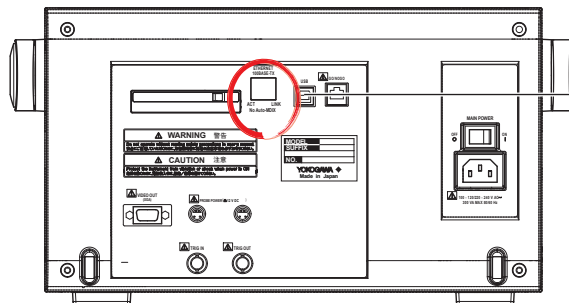


SYSTEM key
Press this key to select the Ethernet or VXI-11 interface.

SHIFT + CLEAR key
Press this key to switch from remote mode to local mode and enable the front panel keys. This key is disabled when the DL6000/DLM6000 has been set to Local Lockout mode (see page 2-3) by a controller.

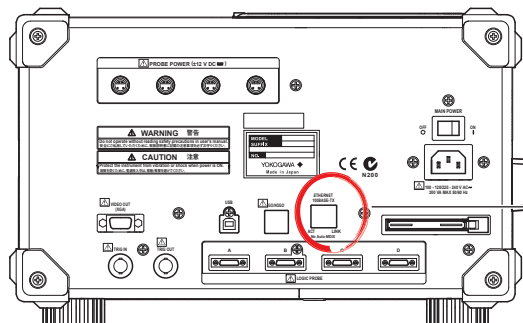
Rear Panel

DL6000



Ethernet port
This port is for connecting the DL6000/DLM6000 to a controller (such as a PC) using an Ethernet cable.

DLM6000



Ethernet port
This port is for connecting the DL6000/DLM6000 to a controller (such as a PC) using an Ethernet cable.

2.2 Ethernet/VXI-11 Interface Features and Specifications

Ethernet/VXI-11 Interface Features

Reception Feature

The DL6000/DLM6000 reception feature allows you to specify the same settings through an Ethernet connection that you can specify using the front panel keys.

The DL6000/DLM6000 can receive output requests for measured and computed data, panel setting data, and error codes.

Transmission Feature

The DL6000/DLM6000 can transmit measured and computed data.

The DL6000/DLM6000 can transmit panel setting data and the status byte.

The DL6000/DLM6000 can transmit error codes when errors occur.

Ethernet/VXI-11 Interface Specifications

Electrical and mechanical specifications	IEEE802.3 compliant	
Simultaneous connections	1	
Port number	Ethernet:	10001/tcp
	VXI-11:	10240/tcp, 10250/tcp, 111/tcp, and 111/udp

Data Transfer Rates

Controller: PC (Pentium 4 3.4-GHz) with Windows XP Professional SP1

Network adapter: Corega FEther PCI-TXL

Programming language: Visual C++

Ethernet Interface (/C8, /C9, /C10 and /C12 options)

The following table contains approximate waveform data response times for analog signals.

Number of Data Points	Word Data	ASCII Data
2500	Approx. 16 ms	Approx. 0.391 s
125000	Approx. 259 ms	Approx. 19.063 s
1250000	Approx. 2313 ms	Approx. 189.812 s
2500000	Approx. 4595 ms	Approx. 379.750 s
6250000	Approx. 10400 ms	Approx. 950.532 s

The following table contains approximate waveform data response times for logic signals.

Number of Data Points	Double Word Data	ASCII Data
2500	Approx. 31 ms	Approx. 0.078 s
125000	Approx. 704 ms	Approx. 3.530 s
1250000	Approx. 6768 ms	Approx. 35.327 s
2500000	Approx. 14081 ms	Approx. 70.952 s
6250000	Approx. 34523 ms	Approx. 177.313 s

VXI-11 Ethernet Interface (/C8, /C9, /C10 and /C12 options)

The following table contains approximate waveform data response times for analog signals.

Number of Data Points	Word Data	ASCII Data
2500	Approx. 31 ms	Approx. 0.406 s
125000	Approx. 235 ms	Approx. 19.172 s
1250000	Approx. 2286 ms	Approx. 191.876 s
2500000	Approx. 4541 ms	Approx. 383.012 s
6250000	Approx. 11150 ms	Approx. 958.128 s

The following table contains approximate waveform data response times for logic signals.

Number of Data Points	Double Word Data	ASCII Data
2500	Approx. 31 ms	Approx. 0.094 s
125000	Approx. 828 ms	Approx. 3.906 s
1250000	Approx. 6938 ms	Approx. 37.345 s
2500000	Approx. 13344 ms	Approx. 74.143 s
6250000	Approx. 32126 ms	Approx. 184.894 s

Switching between Remote and Local Modes

When Switching from Local to Remote Mode

The DL6000/DLM6000 switches to remote mode when it is in local mode and it receives a `:COMMunicate:REMOte ON` command from the PC.

- “REMOTE” appears at the top center of the screen.
- All keys except the **SHIFT + CLEAR** key are disabled.
- Settings entered in local mode are retained even when the DL6000/DLM6000 switches to remote mode.

When Switching from Remote to Local Mode

When the DL6000/DLM6000 is in remote mode and you press **SHIFT + CLEARCLEAR**, the DL6000/DLM6000 switches to Local mode, unless it has received a `:COMMunicate:LOCKout ON` command from the PC, in which case pressing **SHIFT + CLEARCLEAR** will have no effect.

The DL6000/DLM6000 switches to local mode when it receives a `:COMMunicate:REMOte OFF` command from the PC, regardless of the local lockout state.

- The “REMOTE” indicator at the top center of the screen disappears.
- Key operations are enabled.
- Settings entered in remote mode are retained even when the DL6000/DLM6000 switches to local mode.

Note

The Ethernet/VXI-11 interface cannot be used simultaneously with another interface (USB or GP-IB interface).

User Authentication Feature

You must enter a user name and password to access the DL6000/DLM6000 through the Ethernet interface. If the DL Series Library (TMCTL) version is 1.40 or later, the password is encrypted using the MD5 algorithm (RSA Data Security, Inc. MD5 Message-Digest Algorithm) and then sent to the DL6000/DLM6000.

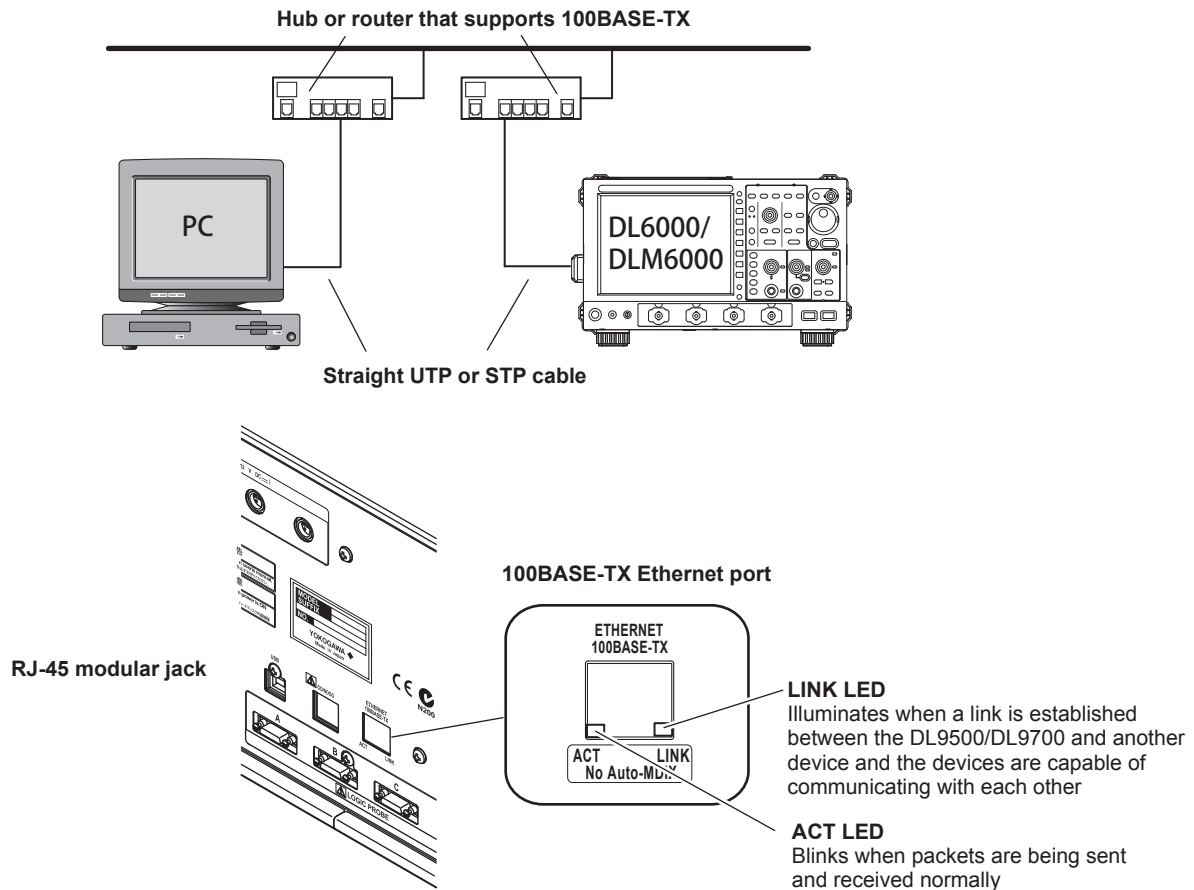
Set the user name and password in the Remote Control setup screen in the DL6000/DLM6000 UTILITY menu. For instructions on how to set the user name and password, see section 2.4, “Setting the DL6000/DLM6000 (Network).”

If you select VXI-11 in the Device menu of the Remote Control setup screen (explained later), the user authentication setup menu will not appear in the Remote Control setup screen.

2.3 Connecting to the Ethernet/VXI-11 Interface

Connection Procedure

Connect a UTP (Unshielded Twisted-Pair) or STP (Shielded Twisted-Pair) cable that is connected to a hub or other network device to the 100BASE-TX port on the DL6000/DLM6000 rear panel.



Notes about Connections

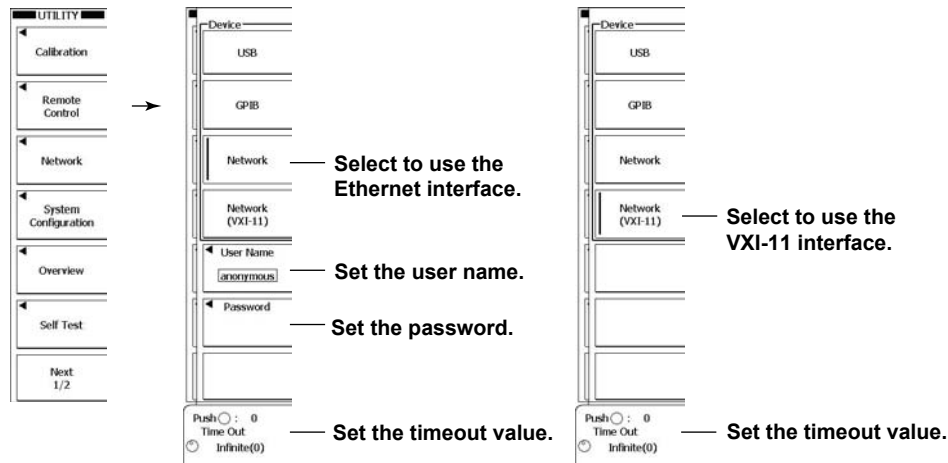
- Be sure to connect the DL6000/DLM6000 to a PC through a hub using straight cables. The DL6000/DLM6000 may not operate properly if you connect it to a PC directly using a cross cable.
- If you use UTP cables (straight cables), make sure that they are category 5.

2.4 Setting the DL6000/DLM6000 (Network)

Procedure

UTILITY_Remote Control_Network Menu

Press **UTILITY**, the **Remote Control** soft key, and then the **Network** or **Network(VXI-11)** soft key to display the following menu.



Note

- Only the interface that you select after pressing Remote Control is valid. The DL6000/DLM6000 does not accept commands that are transmitted to other unselected communication interfaces.
- For details on how to operate the soft keyboard, see section 4.2, "Entering Values and Strings" in the *DL6000/DLM6000 User's Manual (IM DLM6054-01EN)*.
- User names and passwords are case-sensitive.

Explanation

To use a controller to configure the same settings that you can configure using the DL6000/DLM6000 keys or to send setting parameters and waveform data to a controller, you must configure the settings described below.

User Name and Password

The Ethernet interface has a user authentication feature. Set the DL6000/DLM6000 user name and password in advance.

If you select VXI-11 in the Device menu of the Remote Control setup screen, the user authentication setup menu will not appear in the Remote Control setup screen.

User Name

Set the user name using up to 30 characters. The default setting is "anonymous."

Password

Set the password using up to 30 characters.

2.4 Setting the DL6000/DLM6000 (Network)

Timeout Value

The DL6000/DLM6000 disconnects itself from the controller if it is not accessed for the period of time that you specify using the timeout value.

TCP/IP

To use the Ethernet interface, you must specify the following TCP/IP settings.

- IP address
- Subnet mask
- Default gateway

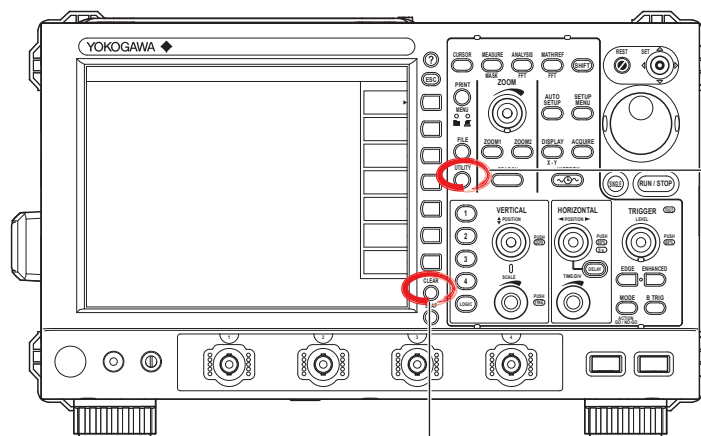
For details on how to specify these settings, see section 14.2, “Setting Up the TCP/IP” in the *DL6000/DLM6000 User's Manual (IM DLM6054-01EN)*.

Note

- The DL6000/DLM6000 terminates the connection if there is an error in the user authentication process.
 - You do not need to enter a password when the user name is set to “anonymous.”
-

3.1 Part Names and Functions

Front Panel



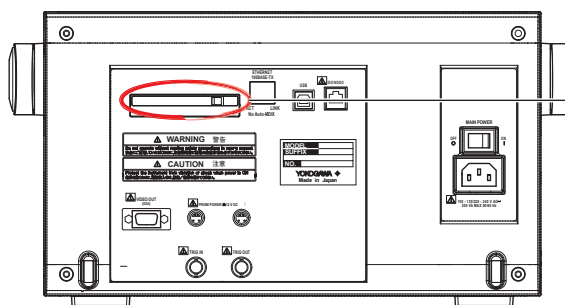
SYSTEM key
Press this key to select the USB interface.

SHIFT + CLEAR key

Press this key to clear the remote mode (controlled via communications) and enter the local mode in which key operations are enabled. However, this act is invalid if the instrument has been set to Local Lockout mode (see page 3-3) by the controller.

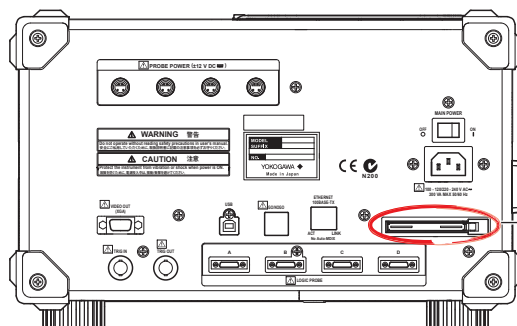
Rear Panel

DL6000



PC card slot
Connect a GP-IB card to the PC card slot and connect to a controller (such as a PC).

DLM6000



PC card slot
Connect a GP-IB card to the PC card slot and connect to a controller (such as a PC).

3.2 Connecting the GP-IB Card

GP-IB Card

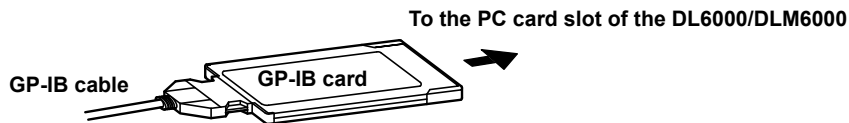
Use the NI PCMCIA-GPIB card by National Instruments.

GP-IB Cable

Use the GP-IB cable that comes with the GP-IB card.

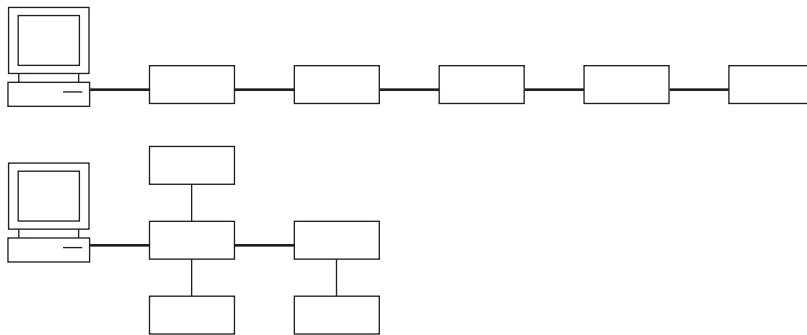
Connection Procedure

Insert the GP-IB card into the DL6000/DLM6000 PC card slot.



Precautions to Be Taken When Making Connections

- For the handling of the GP-IB card, see the manual that comes with the GP-IB card.
- Attach the GP-IB correctly with the front face up.
- Connect the GP-IB card to the DL6000/DLM6000 PC card slot first. Then, turn the DL6000/DLM6000 ON.
- Multiple cables can be used to connect multiple devices. However, no more than 15 devices including the controller can be connected on a single bus.
- When connecting multiple devices, each device must have its own unique address.
- Use a cable of length 2 m or less for connecting the devices.
- Make sure the total cable length does not exceed 20 m.
- When communicating, have at least two-thirds of the devices turned ON.
- When connecting multiple devices, connect them in a star or linear configuration (see the figure below). Do not wire them in a loop or parallel configuration.



CAUTION

When connecting or disconnecting communication cables, make sure to turn OFF the PC and the DL6000/DLM6000. Otherwise, erroneous operation or damage to the internal circuitry may result.

3.3 GP-IB Interface Functions

GP-IB Interface Functions

Listener Capability

- All of the information that you can set with the panel keys can be set through the GP-IB interface except for turning ON/OFF the power and setting the communication parameters.
- Receives commands from a controller requesting the output of setup information, waveform data, and other information.
- Also receives status report commands.

Talker Capability

Outputs setup information, waveform data, and other information.

Note

Listen-only, talk-only, and controller capabilities are not available on the DL6000/DLM6000.

Switching between Remote and Local Modes

When Switching from Local to Remote Mode

Receiving a REN (Remote Enable) message from the PC when the DL6000/DLM6000 is in the local mode causes the DL6000/DLM6000 to switch to the remote mode.

- REMOTE is displayed in the center of the upper section of the screen.
- All keys except the **SHIFT + CLEAR** key are disabled.
- Settings entered in local mode are retained even when the DL6000/DLM6000 switches to remote mode.

When Switching from Remote to Local Mode

Pressing **SHIFT + CLEAR** in remote mode puts the DL6000/DLM6000 in local mode. However, this act is invalid if the DL6000/DLM6000 has been set to Local Lockout mode (see page 3-6) by the controller.

- REMOTE indication in the center of the upper section of the screen disappears.
- Key operations are enabled.
- Settings entered in remote mode are retained even when the DL6000/DLM6000 switches to local mode.

Note

The GP-IB interface cannot be used simultaneously with another interfaces (USB or network interfaces).

3.4 GP-IB Interface Specifications

GP-IB Interface Specifications

Electrical and mechanical specifications:	Conforms to IEEE St'd 488-1978
Functional specifications:	See table below.
Protocol:	Conforms to IEEE St'd 488.2-1992
Code used:	ISO (ASCII) code
Mode:	Addressable mode
Address setting:	The address can be set in the range from 0 to 30 on the GP-IB setting screen that is played using the MISC menu.
Clear remote mode:	Remote mode can be cleared by pressing SHIFT + CLEAR except when the DL6000/DLM6000 has been set to Local Lockout mode by the controller.

Functional specifications

Function	Subset Name	Description
Source handshaking	SH1	Full source handshaking capability
Acceptor handshaking	AH1	Full acceptor handshaking capability
Talker	T6	Basic talker capability, serial polling, untalk on MLA (My Listen Address), and no talk-only capability
Listener	L4	Basic listener capability, unlisten on MTA (My Talk Address), and no listen-only capability.
Service request	SR1	Full service request capability
Remote local	RL1	Full remote/local capability
Parallel polling	PP0	No parallel polling capability
Device clear	DC1	Full device clear capability
Device trigger	DT0	No device trigger capability
Controller	C0	No controller capability
Electrical characteristics	E1	Open collector

Data Rate

Controller:	PC (Pentium4 3.4 GHz, USB 2.0), OS (Windows XP Professional SP1)
Language used:	Visual C++

The table below lists the reference response times when outputting waveform data of analog signals.

Number of Data Points	Word Data	ASCII Data
2500	Approx. 16 ms	Approx. 0.390 s
125000	Approx. 344 ms	Approx. 19.453 s
1250000	Approx. 3172 ms	Approx. 194.516 s
2500000	Approx. 6282 ms	Approx. 389.047 s
6250000	Approx. 15641 ms	Approx. 971.985 s

The table below lists the reference response times when outputting waveform data of logic signals.

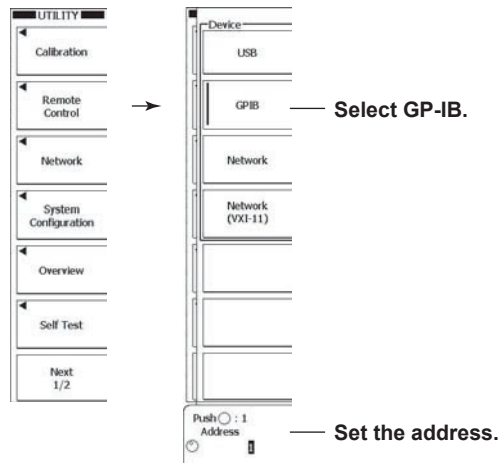
Number of Data Points	Word Data	ASCII Data
2500	Approx. 32 ms	Approx. 0.078 s
125000	Approx. 859 ms	Approx. 3.609 s
1250000	Approx. 8707 ms	Approx. 36.172 s
2500000	Approx. 17365 ms	Approx. 72.500 s
6250000	Approx. 43678 ms	Approx. 182,000 s

3.5 Setting the DL6000/DLM6000 (GP-IB)

Procedure

UTILITY_Remote Control_GP-IB Menu

Press UTILITY, the **Remote Control** soft key, and then the **GP-IB** soft key to display the following menu.



Note

Only the communication interface selected by Remote Control is enabled. The DL6000/DLM6000 does not accept commands that are transmitted to other unselected communication interfaces.

Explanation

Enter the following settings when using a controller to set information that can be specified through key operation on the DL6000/DLM6000 or when outputting setting parameters or output waveform data to the controller.

Setting the Address

Set the address of the DL6000/DLM6000 within the following range for the addressable mode.

0 to 30

Each device that can be connected via GP-IB has a unique address within the GP-IB system. This address is used to distinguish the device from others. Therefore, when you connect the DL6000/DLM6000 to a PC, for example, make sure to assign a unique address to the DL6000/DLM6000.

Note

Do not change the address while the controller is communicating with the DL6000/DLM6000 or other devices over the GP-IB.

3.6 Responses to Interface Messages

Responses to Interface Messages

Responses to a Uni-Line Message

- **IFC (Interface Clear)**

Clears the talker and listener functions. Stops output if data are being output.

- **REN (Remote Enable)**

Switches between the remote and local modes.

IDY (Identify) is not supported.

Responses to a Multi-Line Message (Address Command)

- **GTL (Go To Local)**

Switches to the local mode.

- **SDC (Selected Device Clear)**

- Clears the program message (command) being received and the output queue (see page 6-5).

- *OPC and *OPC? commands in execution are void.

- The *WAI and COMMunicate:WAIT commands are immediately terminated.

PPC (Parallel Poll Configure), GET(Group Execute Trigger), and TCT (Take Control) are not supported.

Responses to a Multi-Line Message (Universal Command)

- **LLO (Local Lockout)**

Disables **CLEAR** on the front panel to prohibit switching to the local mode.

- **DCL (Device Clear)**

Same operation as the SDC message.

- **SPE (Serial Poll Enable)**

Sets the talker function on all devices on the bus to serial polling mode. The controller polls the devices in order.

- **SPD (Serial Poll Disable)**

Clears the serial polling mode of the talker function on all devices on the bus.

PPU (Parallel Poll Unconfigure) is not supported.

What Are Interface Messages

Interface messages are also referred to as interface commands or bus commands. They are commands that are issued by the controller. They are classified as follows:

Uni-Line Messages

A single control line is used to transmit uni-line messages. The following three types are available.

- IFC (Interface Clear)
- REN (Remote Enable)
- IDY (Identify)

Multi-Line Messages

Eight data lines are used to transmit multi-line messages. The messages are classified as follows:

• Address Commands

These commands are valid when the instrument is designated as a listener or as a talker. The following five types are available.

Commands that are valid on an instrument that is designated as a listener

- GTL (Go To Local)
- SDC (Selected Device Clear)
- PPC (Parallel Poll Configure)
- GET (Group Execute Trigger)

Commands that are valid on an instrument that is designated as a talker

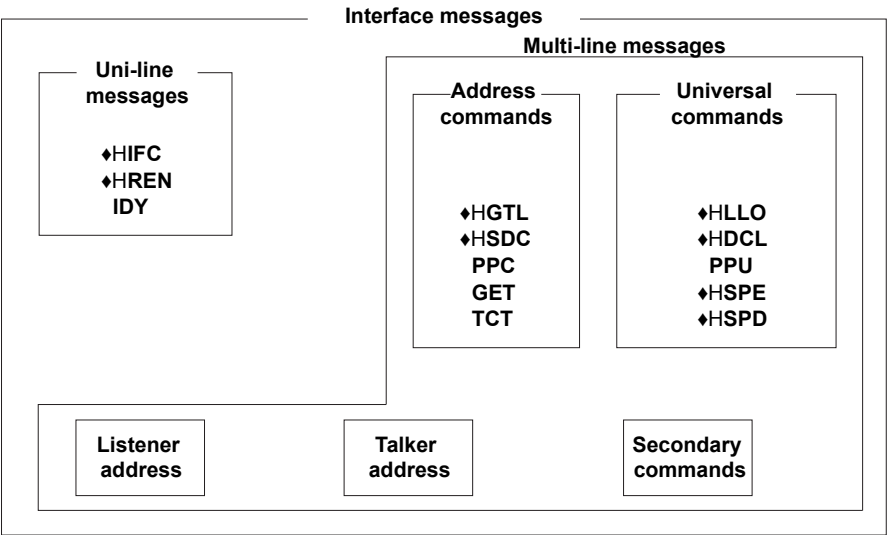
- TCT (Take Control)

• Universal commands

These commands are valid on all instruments regardless of the listener and talker designations. The following five types are available.

- LLO (Local Lockout)
- DCL (Device Clear)
- PPU (Parallel Poll Unconfigure)
- SPE (Serial Poll Enable)
- SPD (Serial Poll Disable)

In addition, listener address, talker address, and secondary commands are also considered interface messages.



Interface messages that DL6000/DLM6000 supports are indicated with ♦ marks.

Note

The Differences between SDC and DCL

In multi-line messages, SDC messages are those that require talker or listener designation and DCL messages are those that do not require the designation. Therefore, SDC messages are directed at a particular instrument while DCL messages are directed at all instruments on the bus.

4.1 Messages

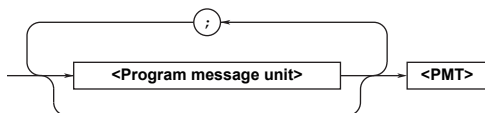
Messages

Messages are used to exchange information between the controller and the instrument. Messages that are sent from the controller to the instrument are called program messages and messages that are sent back from the instrument to the controller are called response messages.

If a program message contains a message unit that requests a response (a query), the instrument returns a response message upon receiving the program message. A single response message is always returned in response to a single program message.

Program Messages

The program message format is shown below



<Program Message Unit>

A program message consists of zero or more program message units; each unit corresponds to one command. The instrument executes the received commands in order.

Each program message unit is separated by a semicolon (;).

For details regarding the format of the program message unit, see the next section.

Example

```
:ACQuire:MODE NORMAL;HRMode 1<PMT>
```

Unit Unit

<PMT>

PMT is a program message terminator. The following three types are available.

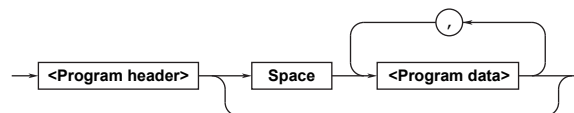
NL (New Line): Same as LF (Line Feed). ASCII code "0AH"

^EOM: The END message as defined by USBTMC (The data byte that is sent simultaneously with the END message is the last data of the program message.)

NL^EOM: NL with an END message added (NL is not included in the program message.)

Program Message Unit Format

The program message unit format is shown below



<Program Header>

The program header indicates the command type. For details, see page 4-3.

<Program Data>

If certain conditions are required in executing a command, program data is added. A space (ASCII code "20H") separates the program data from the header. If there are multiple sets of program data, they are separated by commas (,).

For details, see page 4-5.

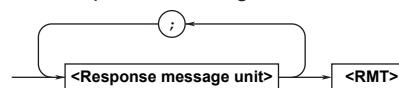
Example

```
:ACQuire:MODE NORMAL<PMT>
```

Header Data

Response Messages

The response message format is shown below.



<Response Message Unit>

A response message consists of one or more response message units; each response message unit corresponds to one response.

Response message units are separated by a semicolon (;).

For details regarding the format of the response message unit, see the next section.

Example

```
:ACQUIRE:MODE NORMAL;HRMode 1<RMT>
```

Unit Unit

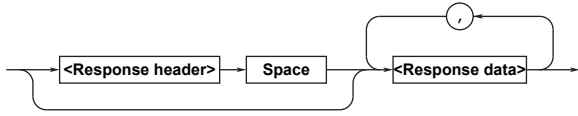
<RMT>

A response message terminator. It is NL^EOM.

4.1 Messages

Response Message Unit Format

The response message unit format is shown below.



<Response Header>

A response header sometimes precedes the response data. A space separates the data from the header. For details, see page 4-4.

<Response Data>

Response data contains the content of the response. If there are multiple sets of response data, they are separated by commas (,). For details, see page 4-5.

Example

1.25E-02<RMT>	:ACQUIRE:MODE	NORMAL<RMT>
└──────────┘	└──────────┘	└──────────┘
Data	Header	Data

If there are multiple queries in a program message, responses are made in the same order as the queries. In most cases, a single query returns a single response message unit, but there are a few queries that return multiple units. The first response message unit always corresponds to the first query, but the n^{th} response unit may not necessarily correspond to the n^{th} query. Therefore, if you want to make sure that every response is retrieved, divide the program messages into individual messages.

Precautions to Be Taken when Transferring Messages

- If a program message that does not contain a query is sent, the next program message can be sent at any time.
- If a program message that contains a query is sent, a response message must be received before the next program message can be sent. If the next program message is sent before the response message is received in its entirety, an error occurs. The response message that was not received is discarded.
- If the controller tries to receive a response message when there is none, an error occurs. If the controller tries to receive a response message before the transmission of the program message is complete, an error occurs.

- If a program message containing multiple message units is sent, and the message contains incomplete units, the instrument attempts to execute the ones that are believed to be complete. However, these attempts may not always be successful. In addition, if the message contains queries, the responses may not be returned.

Deadlock

The instrument can store in its buffer program and response messages of length 1024 bytes or more (The number of available bytes varies depending on the operating conditions). When both the transmit and receive buffers become full at the same time, the instrument can no longer continue to operate. This state is called a deadlock. In this case, operation can be resumed by discarding the program message. Deadlock will not occur if the program message (including the <PMT>) is kept below 1024 bytes. Furthermore, deadlock never occurs if a program message does not contain a query.

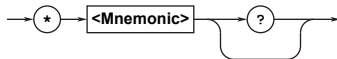
4.2 Commands

Commands

There are three types of commands (program headers) that are sent from the controller to the instrument. They differ in their program header formats.

Common Command Header

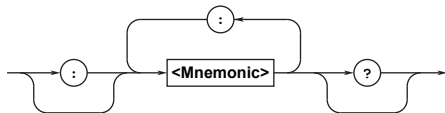
Commands that are defined in the USBTMC-USB488 are called common commands. The header format of a common command is shown below. An asterisk (*) is always placed in the beginning of a command.



Common command example: *CLS

Compound Header

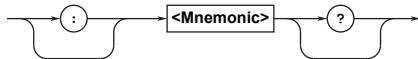
Dedicated commands used by the instrument are classified and arranged in a hierarchy according to their functions. The format of a compound header is shown below. A colon (:) must be used to specify a lower hierarchy.



Compound header example: :ACQuire:MODE

Simple Header

These commands are functionally independent and do not have a hierarchy. The format of a simple header is shown below.



Simple header example: :START

Note

A <mnemonic> is a character string made up of alphanumeric characters.

When Concatenating Commands

• Command Group

A command group is a group of commands that have common compound headers arranged in a hierarchy. A command group may contain sub-groups.

Example Group of commands related to acquisition

```
:ACQuire:AVERage:COUNT
:ACQuire:MODE
:ACQuire:AVERage:EWEight
:ACQuire:REPetitive
:ACQuire:RLENgth
:ACQuire:INTERLeave
```

• When Concatenating Commands of the Same Group

The instrument stores the hierarchical level of the command that is currently being executed, and performs analysis on the assumption that the next command sent will also belong to the same level. Therefore, common header sections can be omitted for commands belonging to the same group.

Example :ACQuire:MODE NORMAl;
INTERLeave 1<PMT>

• When Concatenating Commands of Different Groups

If the following command does not belong to the same group, a colon (:) is placed in front of the header (cannot be omitted).

Example :ACQuire:MODE NORMAl;;DISPlay:
FORMat SINGLE<PMT>

• When Concatenating Simple Headers

If a simple header follows another command, a colon (:) is placed in front of the simple header (cannot be omitted).

Example :ACQuire:MODE NORMAl;;
START<PMT>

• When Concatenating Common Commands

Common commands that are defined in the USBTMC-USB488 are independent of hierarchy. Colons (:) are not needed before a common command.

Example :ACQuire:MODE NORMAl;*CLS;
INTERLeave 1<PMT>

• When Separating Commands with <PMT>

If a terminator is used to separate two commands, each command is a separate message. Therefore, the common header must be specified for each command even when commands belonging to the same command group are being concatenated.

Example :ACQuire:MODE NORMAl<PMT>;
ACQuire:INTERLeave 1<PMT>

4.2 Commands

Upper-Level Query

An upper-level query is a query in which a question mark (?) is appended to the highest level command of a group. Execution of an upper-level query allows all settings that can be specified in the group to be received at once. Some query groups which are comprised of more than three hierarchical levels can output all the lower level settings.

Example :ACQUIRE? -> :ACQUIRE:AVERAGE:
COUNT 2;EWEIGHT 16;:ACQUIRE:
HRMODE 0;INTERLEAVE 0;
INTERPOLATE 1;MODE NORMAL;
REPETITIVE 0;RLENGTH 12500

The response to an upper-level query can be transmitted as a program message back to the instrument. In this way, the settings that existed when the upper-level query was made can be restored. However, some upper-level queries do not return setup information that is not currently in use. It is important to remember that not all the group's information is necessarily returned as part of a response.

Header Interpretation Rules

The instrument interprets the header that is received according to the rules below.

- Mnemonics are not case sensitive.
Example "CURSor" can also be written as "cursor"
or "Cursor."
- The lower-case section of the header can be omitted.
Example "CURSor" can also be written as "CURSO"
or "CURS."
- The question mark (?) at the end of a header indicates that it is a query. The question mark (?) cannot be omitted.
Example The shortest abbreviation for CURSor? is CURS?.
- If the <x> (value) at the end of a mnemonic is omitted, it is interpreted as a 1.
Example If "CHANnel<x>" is written as "CHAN," it means "CHANnel1."
- **The section enclosed by braces ([]) can be omitted.**
Example HISTory[:CURRent]:MODE can also be written as HIST:MODE.
However, the last section enclosed by braces ([]) cannot be omitted in an upper-level query.
Example "HISTory?" and "HISTory:CURRent?" are different queries.

4.3 Response

Response

When the controller sends a message unit that has a question mark (?) in its program header (query), the instrument returns a response message to the query. A response message is returned in one of the following two forms.

- **Response Consisting of a Header and Data**

If the response can be used as a program message without any change, it is returned with a command header attached.

Example :ACQUire:MODE?<PMT>
-> :ACQUire:MODE NORMAL<RMT>

- **Response Consisting of Data Only**

If the response cannot be used as a program message unless changes are made to it (query-only command), only the data section is returned. However, there are query-only commands that return responses with the header attached.

Example :MEASure:TRACel:AREAl:PTOPeak:VALue?<PMT> -> 10.0E+00<RMT>

When You Wish to Return a Response without a Header

Responses that return both header and data can be set so that only the data section is returned. The "COMMunicate:HEADer" command is used to do this.

Abbreviated Form

Normally, the lower-case section is removed from a response header before the response is returned to the controller. Naturally, the full form of the header can also be used. For this, the "COMMunicate:VERBose" command is used. The sections enclosed by braces ([]) are also omitted in the abbreviated form.

4.4 Data

Data

A data section comes after the header. A space must be included between the header and the data. The data contains conditions and values. Data is classified as below.

Data	Meaning
<Decimal>	A value expressed as a decimal number (Example: Probe attenuation of CH1 -> CHANne11:PROBe 100)
<Voltage><Time>	A physical value
<Frequency>	(Example: Time axis range -> TIMEbase:TDiv 1US)
<Current>	
<Register>	Register value expressed as binary, octal, decimal or hexadecimal. (Example: Extended event register value -> STATUS:ESE #HFE)
<Character Data>	Predefined character string (mnemonic). Can be selected from { }. (Example: Select the input coupling of CH1 -> CHANne11:COUpling {AC DC DC50 GND})
<Boolean>	Indicates ON and OFF. Set using ON, OFF or a value (Example: Turn ON the CH1 display -> CHANne11:DISPlay ON)
<String data>	An arbitrary character string (Example: Comment to a screen data output -> MATH1:UNIT:USERdefine "VOLT")
<Filename>	Indicates a file name. (Example: Save file name -> FILE:SAVE:WAVEform:NAME "CASE1")
<Block data>	Arbitrary 8-bit data (Example: Response to acquired waveform data -> #800000010ABCDEFGHJ)

<Decimal>

<Decimal> indicates a value expressed as a decimal number, as shown in the table below. Decimal values are given in the NR form as specified in the ANSI X3.42-1975.

Symbol	Meaning	Example
<NR1>	Integer	125-1 +1000
<NR2>	Fixed-point number	125.0 -.90 +001.
<NR3>	Floating-point number	125.0E+0 -9E-1 +.1E4
<NRf>	Any of the forms <NR1> to <NR3> is allowed.	

- The instrument can receive decimal values that are sent from the controller in any of the forms, <NR1> to <NR3>. This is represented by <NRf>.
- For response messages that the instrument returns to the controller, the form (<NR1> to <NR3> to be used) is determined by the query. The same form is used regardless of the size of the value.
- For the <NR3> format, the "+" sign after the "E" can be omitted. However, the "-" sign cannot be omitted.
- If a value outside the setting range is entered, the value is normalized so that it is just inside the range.
- If a value has more significant digits than the available resolution, the value is rounded.

<Voltage>, <Time>, <Frequency>, and <Current>

<Voltage>, <Time>, <Frequency>, and <Current> indicate decimal values that have physical significance. <Multiplier> or <Unit> can be attached to the <NRf> form that was described earlier. It is expressed in one of the following forms.

Form	Example
<NRf><Multiplier><Unit>	5MV
<NRf><Unit>	5E-3V
<NRf><Multiplier>	5M
<NRf>	5E-3

<Multiplier>

<Multipliers> which can be used are indicated below.

Symbol	Word	Multiplier
EX	Exa	10 ¹⁸
PE	Peta	10 ¹⁵
T	Tera	10 ¹²
G	Giga	10 ⁹
MA	Mega	10 ⁶
K	Kilo	10 ³
M	Milli	10 ⁻³
U	Micro	10 ⁻⁶
N	Nano	10 ⁻⁹
P	Pico	10 ⁻¹²
F	Femto	10 ⁻¹⁵
A	Ato	10 ⁻¹⁸

<Unit>

<Units> that can be used are indicated below.

Symbol	Word	Meaning
V	Volt	Voltage
S	Second	Time
HZ	Hertz	Frequency
MHZ	Megahertz	Frequency
A	Ampere	Current

- <Multiplier> and <Unit> are not case sensitive.
- "U" is used to indicate micro "μ".
- "MA" is used for Mega to distinguish it from Milli. The only exception is Megahertz which is expressed as "MHZ." Therefore, the "M (Milli)" multiplier cannot be used for frequencies.
- If both <Multiplier> and <Unit> are omitted, the default unit is used.
- Response messages are always expressed in the <NR3> form. Response messages are returned using the default unit without the <Multiplier> or <Unit>.

<Register>

<Register> indicates an integer, and can be expressed in hexadecimal, octal, or binary as well as a decimal number. It is used when each bit of the value has a particular meaning. It is expressed in one of the following forms.

Form	Example
<NRf>	1
#H<Hexadecimal value made up of the digits 0 to 9 and A to F>	#H0F
#Q<Octal value made up of the digits 0 to 7>	#Q777
#B<Binary value made up of the digits 0 and 1>	#B001100

- <Register> is not case sensitive.
- Response messages are always expressed as <NR1>.

<Character Data>

<Character Data> is a specified string of character data (a mnemonic). It is mainly used to indicate options and is chosen from the character strings given in { }. For interpretation rules, refer to "Header Interpretation Rules" on page 4-4.

Form	Example
{AC DC DC50 GND}	AC

- As with the header, the "COMMunicate:VERBoSe" command can be used to select whether to return the response in the full form or in the abbreviated form.
- The "COMMunicate:HEADer" setting does not affect the character data.

<Boolean>

<Boolean> is data that indicates ON or OFF. It is expressed in one of the following forms.

Form	Example
{ON OFF <NRf>}	ON OFF 1 0

- When <Boolean> is expressed in the <NRf> form, "OFF" is selected if the rounded integer value is 0, and ON for all other cases.
- A response message is always returned with a 1 if the value is ON and 0 if the value is OFF.

<String data>

<String data> is not a specified character string like <Character data>. It is an arbitrary character string. The character string must be enclosed in single quotation marks (') or double quotation marks (").

Form	Example
<String data>	'ABC' "IEEE488.2-1987"

- If a character string contains a double quotation mark ('), the double quotation mark is replaced by two double quotation marks ("). This rule also applies to a single quotation mark within a character string.
- A response message is always enclosed in double quotation marks (").
- <String data> is an arbitrary character string. Therefore the instrument assumes that the remaining program message units are part of the character string if no single (') or double quotation mark (") is encountered. As a result, no error is detected if a quotation mark is omitted.

<Filename>

<Filename> is data that indicates a file name. It is expressed in one of the following forms.

Form	Example
{<NRf> <Character data> <String data>}	1 CASE "CASE"

- <NRf> is rounded to an 8-digit integer and converted to ASCII code. The result is the file name (example: 1 becomes "00000001"). Negative values are not allowed.
- Response messages are always returned in the <String data> form.
- For <Character data>, the first 12 characters become the file name.
- For <String data>, the first 259 characters become the file name.
- For a description of the number of characters of the <String data> file name, see the *DL9500/DL9700 User's Manual*.

<Block data>

<Block data> is arbitrary 8-bit data. It is only used in response messages on the DL9500/DL9700. Below is the syntax.

Form	Example
#N<N-digit decimal number>	#800000010ABCDEFGHIJ
<Data byte sequence>	

- #N
Indicates that the data is <Block data>. "N" indicates the number of succeeding data bytes (digits) in ASCII code characters.
- <N-digit decimal number>
Indicates the number of bytes of data (example: 00000010 = 10 bytes).
- <data byte sequence>
Expresses the actual data (example: ABCDEFGHIJ).
- Data is comprised of 8-bit values (0 to 255). This means that the ASCII code "0AH," which stands for "NL," can also be a code used for data. Hence, care must be taken when programming the controller.

4.5 Synchronization with the Controller

Overlap Commands and Sequential Commands

There are two types of commands, overlap commands and sequential commands. In the case of overlap commands, the execution of the next command may start before the execution of the previous command is completed.

For example, if the next program message is transmitted when specifying the V/div value and querying the result, the response always returns the most recent setting (5 V in this case).

```
:CHANnel1:VDIV 5V;VDIV?<PMT>
```

This is because the next command is forced to wait until the processing of "CHANnel1:VDIV" itself is completed. This type of command is called a sequential command.

On the contrary, let us assume that you send the next program message when you wish to load a file and query the V/div value of the result.

```
:FILE:LOAD:SETup:EXECute "CASE1";:  
CHANnel1:VDIV?
```

In this case, "CHANnel1:VDIV?" is executed before the loading of the file is completed, and the V/div value that is returned is the value before the file is loaded. The act of executing the next command before the processing of itself is completed such as with "FILE:LOAD:SETup:EXECute "CASE1"" is called an overlap operation. A command that operates in this way is called an overlap command.

In such case, the overlap operation can be prevented by using the methods below.

Synchronizing with Overlap Commands

- Using the *WAI Command

The *WAI command holds the subsequent commands until the overlap command is completed.

```
Example :COMMunicate:OPSE #H0040;:  
FILE:LOAD:SETup:  
EXECute "CASE1";*WAI;:  
CHANnel1:VDIV?<PMT>
```

"COMMunicate:OPSE" is a command used to select the "*WAI" target. Here, media access is specified. Because "*WAI" is executed immediately before "CHANnel1:VDIV?," "CHANnel1:VDIV?" is not executed until the file loading is complete.

- Using the COMMunicate:OVERlap command

The COMMunicate:OVERlap command enables (or disables) overlap operation.

```
Example :COMMunicate:OVERlap #HFFBF;:  
FILE:LOAD:SETup:  
EXECute "CASE1";:CHANnel1:  
VDIV?<PMT>
```

"COMMunicate:OVERlap #HFFBF" enables overlap operation on commands other than media access. Because the overlap operation of file loading is disabled, "FILE:LOAD:SETup:EXECute "CASE1"" operates in the same way as a sequential command. Therefore, CHANnel1:VDIV? is not executed until the file loading is complete.

- Using the *OPC Command

The *OPC command sets the OPC bit, bit 0 of the standard event register (see page 6-4), to 1 when the overlap operation is completed.

```
Example :COMMunicate:OPSE #H0040;  
*ESE 1;  
*ESR?;*SRE 32;:FILE:LOAD:SETup:  
EXECute "CASE1";*OPC<PMT>  
(Read the response to *ESR?)  
(Wait for a service request)  
:CHANnel1:VDIV?<PMT>
```

"COMMunicate:OPSE" is a command used to select the "*OPC" target. Here, media access is specified. "*ESE 1" and "*SRE 32" indicate that a service request is generated only when the OPC bit is 1. "*ESR?" clears the standard event register. In the example above, "CHANnel1:VDIV?" is not executed until a service request is generated.

- **Using the *OPC? Query**

The *OPC? query generates a response when an overlap operation is completed.

Example :COMMunicate:OPSE #H0040;;FILE:
LOAD:SETup:EXECute "CASE1";
*OPC?<PMT>
(Read the response to *OPC?)
:CHANnel1:VDIV?<PMT>

“COMMunicate:OPSE” is a command used to select the “*OPC?” target. Here, media access is specified.

Because “*OPC?” does not generate a response until the overlap operation is completed, the loading of the file will have been completed by the time the response to “*OPC?” is read.

Note

Most commands are sequential commands. Overlap commands are indicated as overlap commands in chapter 5. All other commands are sequential commands.

Achieving Synchronization without Using Overlap Commands

Even for sequential commands, synchronization is sometimes required for non communication-related reasons such as a trigger occurrence.

For example, if the next program message is transmitted to make an inquiry about the waveform data which has been acquired with the trigger mode set to single, the WAVEform:SEND? command may be executed regardless of whether the acquisition has been completed or not and may result in command execution error.

TRIGger:MODE SINGLE;;START;;WAVEform:SEND?<PMT>

In this case, the following method must be used to synchronize with the end of the acquisition.

- **Using the STATus:CONDition? Query**

The “STATus:CONDition?” query is used to query the contents of the condition register (page 6-5).

Whether waveforms are being retrieved can be determined by reading bit 0 of the condition register. If bit 0 of the condition register is “1,” waveforms are being retrieved. Otherwise, it is stopped.

Example TRIGger:MODE SINGLE;;START<PMT>
:STATus:CONDition?<PMT>
(Read the response. If bit 0 is 1, repeat this command until it becomes 1.)
:WAVEform:SEND?<PMT>

The WAVEform:SEND? command will not be executed until bit 0 of the condition register is set to “0.”

- **Using the Extended Event Register**

The changes in the condition register can be reflected in the extended event register (page 6-5).

Example :STATus:FILTer1 FALL;;
STATus:EESR?;*SRE 8;;
TRIGger:MODE SINGLE;;START<PMT>
(Read the response to STATus:EESR?)
(Wait for a service request)
:WAVEform:SEND?<PMT>

The “STATus:FILTer1 FALL” command sets the transition filter so that bit 0 (FILTer1) of the extended event register is set to 1 when bit 0 of the condition register changes from 1 to 0.

The “:STATus:EESR 1” command is used to reflect only bit 0 of the extended event register to the status byte.

The “STATus:EESR?” command is used to clear the extended event register.

The “*SRE 8” command is used to generate a service request solely on the cause of the extended event register.

The “WAVEform:SEND?” command is not executed until a service request is generated.

- **Using the COMMunicate:WAIT Command**

The “COMMunicate:WAIT” command halts communications until a specific event is generated.

Example :STATus:FILTer1 FALL;;
STATus:EESR?;;TRIGger:
MODE SINGLE<PMT>
(Read the response to STATus:EESR?)
:COMMunicate:WAIT 1;;WAVEform:
SEND?<PMT>

For a description of “STATus:FILTer1 FALL” and “STATus:EESR?” see the previous section regarding the extended event register.

The “COMMunicate:WAIT 1” command indicates that the program will wait for bit 0 of the extended event register to be set to “1.”

The WAVEform:SEND? command will not be executed until bit 0 of the extended event register is set to “1.”

5.1 List of Commands

Commnd	Function	Page
ACQuire Group		
:ACQuire?	Queries all settings related to the waveform acquisition.	5-35
:ACQuire:AVERage?	Queries all settings related to averaging and the waveform acquisition count.	5-35
:ACQuire:AVERage:COUNT	Sets the waveform acquisition count of averaging mode or queries the current setting.	5-35
:ACQuire:HRMode	Turns ON/OFF the high resolution mode or queries the current setting.	5-35
:ACQuire:INTERLeave	Turns ON/OFF interleave or queries the current setting.	5-35
:ACQuire:MODE	Sets the waveform acquisition mode or queries the current setting.	5-35
:ACQuire:REPetitive	Turns ON/OFF the repetitive sampling or queries the current setting.	5-35
:ACQuire:RELENgth	Sets the record length or queries the current setting.	5-35
:ACQuire:SAMPLing	Sets or queries the sampling mode.	5-35
ANALysis Group		
:ANALysis?	Queries all settings related to the analysis function.	5-36
:ANALysis:AHIStogram<x>?	Queries all settings related to the accumulated histogram function.	5-36
:ANALysis:AHIStogram<x>: HORizontal	Sets the horizontal range of the accumulated histogram or queries the current setting.	5-36
:ANALysis:AHIStogram<x>: MEASure?	Queries all settings related automated measurement of the accumulated histogram.	5-36
:ANALysis:AHIStogram<x>: MEASure:CURSor?	Queries all settings related to cursor measurement of the accumulated histogram.	5-36
:ANALysis:AHIStogram<x>: MEASure:CURSor:BASic?	Queries all settings related to basic items of the cursor of the accumulated histogram.	5-36
:ANALysis:AHIStogram<x>: MEASure:CURSor[:BASic]:ALL	Turns ON/OFF all basic items of the cursor of the accumulated histogram.	5-36
:ANALysis:AHIStogram<x>: MEASure:CURSor[:BASic]:C<x>?	Queries all settings related to the cursor of the accumulated histogram.	5-36
:ANALysis:AHIStogram<x>: MEASure:CURSor[:BASic]:C<x>: STATe	Turns ON/OFF the cursor of the accumulated histogram or queries the current setting.	5-36
:ANALysis:AHIStogram<x>: MEASure:CURSor[:BASic]:C<x>: VALue?	Queries the measured value of the cursor of the accumulated histogram.	5-36
:ANALysis:AHIStogram<x>: MEASure:CURSor[:BASic]:DC?	Queries all settings related to measured values between cursors of the accumulated histogram.	5-37
:ANALysis:AHIStogram<x>: MEASure:CURSor[:BASic]:DC:STATe	Turns ON/OFF the measured values between cursors of the accumulated histogram or queries the current setting.	5-37
:ANALysis:AHIStogram<x>: MEASure:CURSor[:BASic]:DC: VALue?	Queries the measured value between cursors of the accumulated histogram.	5-37
:ANALysis:AHIStogram<x>: MEASure:CURSor:CALCulation?	Queries all settings related to calculation items of the cursor of the accumulated histogram.	5-37
:ANALysis:AHIStogram<x>: MEASure:CURSor:CALCulation:ALL	Turns ON/OFF all calculation items of the cursor of the accumulated histogram.	5-37
:ANALysis:AHIStogram<x>: MEASure:CURSor:CALCulation: DEFine<x>	Sets the equation of the calculation item of the cursor of the accumulated histogram or queries the current setting.	5-37
:ANALysis:AHIStogram<x>: MEASure:CURSor:CALCulation: STATe<x>	Turns ON/OFF the calculation item of the cursor of the accumulated histogram or queries the current setting.	5-37
:ANALysis:AHIStogram<x>: MEASure:CURSor:CALCulation: VALue<x>?	Queries the measured value of the calculation item of the cursor of the accumulated histogram.	5-37
:ANALysis:AHIStogram<x>: MEASure:CURSor:HLINKage	Turns ON/OFF the ΔV cursor link of the accumulated histogram or queries the current setting.	5-38

5.1 List of Commands

Commnd	Function	Page
:ANALysis:AHIStogram<x>: MEASure:CURSor:HPOSition<x>	Sets the ΔV cursor position of the accumulated histogram or queries the current setting.	5-38
:ANALysis:AHIStogram<x>: MEASure:CURSor:VLINkage	Turns ON/OFF the ΔT cursor link of the accumulated histogram or queries the current setting.	5-38
:ANALysis:AHIStogram<x>: MEASure:CURSor:VPOSition<x>	Sets the ΔT cursor position of the accumulated histogram or queries the current setting.	5-38
:ANALysis:AHIStogram<x>: MEASure:MODE	Sets the automated measurement mode of the accumulated histogram or queries the current setting.	5-38
:ANALysis:AHIStogram<x>: MEASure:PARAmeter?	Queries all settings related to the automated measurement of waveform parameters of the accumulated histogram.	5-38
:ANALysis:AHIStogram<x>: MEASure:PARAmeter:AREA<x>?	Queries all settings related to the area of the accumulated histogram.	5-38
:ANALysis:AHIStogram<x>: MEASure:PARAmeter:AREA<x>:ALL	Turns ON/OFF all waveform parameters of the accumulated histogram.	5-39
:ANALysis:AHIStogram<x>: MEASure:PARAmeter: AREA<x>:<Parameter>?	Queries all settings related to the waveform parameter of the accumulated histogram.	5-39
:ANALysis:AHIStogram<x>: MEASure:PARAmeter: AREA<x>:<Parameter>:STATe	Turns ON/OFF the waveform parameter of the accumulated histogram or queries the current setting.	5-39
:ANALysis:AHIStogram<x>: MEASure:PARAmeter: AREA<x>:<Parameter>:VALue?	Queries the automated measured value of the waveform parameter of the accumulated histogram.	5-39
:ANALysis:AHIStogram<x>: MEASure:PARAmeter:CALCulation?	Queries all settings related to the calculation items of waveform parameters of the accumulated histogram.	5-39
:ANALysis:AHIStogram<x>: MEASure:PARAmeter:CALCulation: ALL	Turns ON/OFF all calculation items of the waveform parameters of the accumulated histogram.	5-39
:ANALysis:AHIStogram<x>: MEASure:PARAmeter:CALCulation: DEFine<x>	Sets the equation of the calculation items of the waveform parameter of the accumulated histogram or queries the current setting.	5-39
:ANALysis:AHIStogram<x>: MEASure:PARAmeter:CALCulation: STATe<x>	Turns ON/OFF the calculation items of the waveform parameter of the accumulated histogram or queries the current setting.	5-40
:ANALysis:AHIStogram<x>: MEASure:PARAmeter:CALCulation: VALue<x>?	Queries the automated measured value of the calculation items of the waveform parameter of the accumulated histogram.	5-40
:ANALysis:AHIStogram<x>: MEASure:PARAmeter:HRANge<x>	Sets the horizontal range of the waveform parameter of the accumulated histogram or queries the current setting.	5-40
:ANALysis:AHIStogram<x>: MEASure:PARAmeter:VRANge<x>	Sets the vertical range of the waveform parameter of the accumulated histogram or queries the current setting.	5-40
:ANALysis:AHIStogram<x>:MODE	Sets the accumulated histogram mode or queries the current setting.	5-40
:ANALysis:AHIStogram<x>:TRACe	Sets the source trace of the accumulated histogram or queries the current setting.	5-40
:ANALysis:AHIStogram<x>: VERTical	Sets the vertical range of the accumulated histogram or queries the current setting.	5-40
:ANALysis:AHIStogram<x>:WINDow	Sets the measurement target window of the accumulated histogram or queries the current setting.	5-41
:ANALysis:FFT<x>?	Queries all settings related to the FFT computation function.	5-41
:ANALysis:FFT<x>:AVERage?	Queries all FFT analysis averaging settings.	5-41
:ANALysis:FFT<x>:AVERage: EWEight	Sets or queries the attenuation constant of exponential averaging in FFT analysis.	5-41
:ANALysis:FFT<x>:HORizontal?	Queries all settings related the horizontal axis of the FFT computation.	5-41
:ANALysis:FFT<x>:HORizontal: CSPan?	Queries all settings related to the center and span of the horizontal axis of the FFT computation.	5-41
:ANALysis:FFT<x>:HORizontal: CSPan:CENTer	Sets the horizontal center of the FFT computation or queries the current setting.	5-41
:ANALysis:FFT<x>:HORizontal: CSPan:SPAN	Sets the horizontal span of the FFT computation or queries the current setting.	5-41
:ANALysis:FFT<x>:HORizontal: LRIGHt?	Queries all settings related the left and right edges of the horizontal axis of the FFT computation.	5-41
:ANALysis:FFT<x>:HORizontal: LRIGHt:RANge	Sets the range of the horizontal left and right edges of the FFT computation or queries the current setting.	5-41

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Command	Function	Page
:ANALysis:FFT<x>:HORizontal:MODE	Sets the horizontal mode of the FFT computation or queries the current setting.	5-42
:ANALysis:FFT<x>:LENGth	Sets the number of FFT points of the FFT computation or queries the current setting.	5-42
:ANALysis:FFT<x>:MEASure?	Queries all settings related to the automated measurement of the FFT computation.	5-42
:ANALysis:FFT<x>:MEASure:MARKer?	Queries all settings related to the marker cursor measurement of the FFT computation.	5-42
:ANALysis:FFT<x>:MEASure:MARKer:BASic?	Queries all settings related to basic items of the marker cursor of the FFT computation.	5-42
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:ALL	Turns ON/OFF all basic items of the marker cursor of the FFT computation.	5-42
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:DFRequency?	Queries all settings related to the frequency value between marker cursors of the FFT computation.	5-42
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:DFRequency:STATE	Turns ON/OFF the frequency value between marker cursors of the FFT computation or queries the current setting.	5-42
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:DFRequency:VALue?	Queries the frequency value between marker cursors of the FFT computation.	5-42
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:DV?	Queries all settings related to the power value between marker cursors of the FFT computation.	5-42
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:DV:STATE	Turns ON/OFF the power value between marker cursors of the FFT computation or queries the current setting.	5-43
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:DV:VALue?	Queries the power value between marker cursors of the FFT computation.	5-43
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:FREquency<x>?	Queries all settings related to the frequency value of the marker cursor of the FFT computation.	5-43
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:FREquency<x>:STATE	Turns ON/OFF the frequency value of the marker cursor of the FFT computation or queries the current setting.	5-43
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:FREquency<x>:VALue?	Queries the frequency value of the marker cursor of the FFT computation.	5-43
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:POSition<x>{<Nrf>}	Sets the marker cursor position of the FFT computation or queries the current setting.	5-43
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:V<x>?	Queries all settings related to the power value of the marker cursor of the FFT computation.	5-43
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:V<x>:STATE	Turns ON/OFF the power value of the marker cursor of the FFT computation or queries the current setting.	5-43
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:V<x>:VALue?	Queries the power value of the marker cursor of the FFT computation.	5-44
:ANALysis:FFT<x>:MEASure:MARKer:CALCulation?	Queries all settings related to calculation items of the marker cursor of the FFT computation.	5-44
:ANALysis:FFT<x>:MEASure:MARKer:CALCulation:ALL	Turns ON/OFF all calculation items of the marker cursor of the FFT computation.	5-44
:ANALysis:FFT<x>:MEASure:MARKer:CALCulation:DEFine<x>	Sets the equation of the calculation items of the marker cursor of the FFT computation or queries the current setting.	5-44
:ANALysis:FFT<x>:MEASure:MARKer:CALCulation:STATE<x>	Turns ON/OFF the calculation items of the marker cursor of the FFT computation or queries the current setting.	5-44
:ANALysis:FFT<x>:MEASure:MARKer:CALCulation:VALue<x>?	Queries the measured value of the calculation items of the marker cursor of the FFT computation.	5-44
:ANALysis:FFT<x>:MEASure:MODE	Sets the automated measurement mode of the FFT computation or queries the current setting.	5-44
:ANALysis:FFT<x>:MEASure:PEAK?	Queries all settings related to the peak value measurement of the FFT computation.	5-44
:ANALysis:FFT<x>:MEASure:PEAK:BASic?	Queries all settings related to basic items of the peak value of the FFT computation.	5-44
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:ALL	Turns ON/OFF all basic items of the peak value of the FFT computation.	5-45
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:DFRequency?	Queries all settings related to the frequency value between peak values of the FFT computation.	5-45

5.1 List of Commands

Commnd	Function	Page
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:DFRequency:STATe	Turns ON/OFF the frequency value between peak values of the FFT computation or queries the current setting.	5-45
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:DFRequency:VALue?	Queries the frequency value between peak values of the FFT computation.	5-45
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:DV?	Queries all settings related to the power value between peak values of the FFT computation.	5-45
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:DV:STATe	Turns ON/OFF the power value between peak values of the FFT computation or queries the current setting.	5-45
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:DV:VALue?	Queries the power value between peak values of the FFT computation.	5-45
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:FREQuency<x>?	Queries all settings related to the peak frequency value of the FFT computation.	5-45
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:FREQuency<x>:STATe	Turns ON/OFF the peak frequency value of the FFT computation or queries the current setting.	5-45
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:FREQuency<x>:VALue?	Queries the peak frequency value of the FFT computation.	5-46
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:RANGe<x>	Sets the measurement range of the peak value of the FFT computation or queries the current setting.	5-46
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:V<x>?	Queries all settings related to the peak value of the FFT computation.	5-46
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:V<x>:STATe	Turns ON/OFF the peak value of the FFT computation or queries the current setting.	5-46
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:V<x>:VALue?	Queries the peak value of the FFT computation.	5-46
:ANALysis:FFT<x>:MEASure:PEAK:CALCulation?	Queries all settings related to calculation items of the FFT computation.	5-46
:ANALysis:FFT<x>:MEASure:PEAK:CALCulation:ALL	Turns ON/OFF all calculation items of the FFT computation.	5-46
:ANALysis:FFT<x>:MEASure:PEAK:CALCulation:DEFine<x>	Sets the equation of the calculation item of the FFT computation or queries the current setting.	5-46
:ANALysis:FFT<x>:MEASure:PEAK:CALCulation:STATe<x>	Turns ON/OFF the calculation items of the FFT computation or queries the current setting.	5-47
:ANALysis:FFT<x>:MEASure:PEAK:CALCulation:VALue<x>?	Queries the measured value of the calculation item of the FFT computation.	5-47
:ANALysis:FFT<x>:MODE	Sets or queries the waveform display mode for FFT analysis.	5-47
:ANALysis:FFT<x>:RANGe	Sets the measurement source window used in the FFT computation or queries the current setting.	5-47
:ANALysis:FFT<x>:RPOSition (Ref Position)	Sets the center point of magnification of the vertical axis of the FFT computation or queries the current setting.	5-47
:ANALysis::FFT<x>:TRACe	Sets or queries the source waveform for FFT analysis.	5-47
:ANALysis::FFT<x>:TYPE	Sets or queries the spectrum for FFT analysis.	5-47
:ANALysis:FFT<x>:VERTical?	Queries all settings related the vertical axis of the FFT computation.	5-48
:ANALysis:FFT<x>:VERTical:LEVel	Sets the display position of the vertical axis of the FFT computation or queries the current setting.	5-48
:ANALysis:FFT<x>:VERTical:MODE	Sets the vertical axis mode of the FFT computation or queries the current setting.	5-48
:ANALysis:FFT<x>:VERTical:SENSitivity	Sets the vertical sensitivity of the FFT computation or queries the current setting.	5-48
:ANALysis:FFT<x>:WINDow	Sets the window function of the FFT computation or queries the current setting.	5-48
:ANALysis:TYPE<x>	Sets the analysis function type or queries the current setting.	5-48
:ANALysis:VTDisplay	Turns ON/OFF the VT waveform display or queries the current setting.	5-48
:ANALysis:WAIT<x>?	Waits for the completion of the automated measurement with a timeout option.	5-48
:ANALysis:WPARAMeter<x>?	Queries all settings related to the waveform parameter measurement function.	5-48
:ANALysis:WPARAMeter<x>:BIT<x>?	Queries all settings related to each logic bit of logic waveform parameter measurement.	5-49
:ANALysis:WPARAMeter<x>:BIT<x>:AREA<x>?	Queries all settings related to each area of logic waveform parameter measurement.	5-49
:ANALysis:WPARAMeter<x>:BIT<x>:AREA<x>:TYPE	Sets the logic waveform parameters for logic waveform parameter measurement or queries the current setting.	5-49
:ANALysis:WPARAMeter<x>:CALCulation	Sets the calculation items of the automated measurement of waveform parameters or queries the current setting.	5-49

5.1 List of Commands

Commnd	Function	Page
:ANALysis:WPARAMeter<x>: HISTogram?	Queries all settings related to the histogram display of the waveform parameter measurement.	5-49
:ANALysis:WPARAMeter<x>: HISTogram:MEASure?	Queries all settings related to the automated measurement of the histogram display of the waveform parameter measurement.	5-49
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:CURSor?	Queries all settings related to the cursor measurement on the histogram of the waveform parameter measurement.	5-49
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:CURSor:ALL	Turns ON/OFF all histogram cursors of waveform parameter measurement.	5-49
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:CURSor:C<x>?	Queries all settings related to the cursor measurement on the histogram of the waveform parameter measurement.	5-49
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:CURSor:C<x>: POSITION	Sets the cursor position on the trend of the waveform parameter measurement or queries the current setting.	5-50
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:CURSor:C<x>: STATe	Turns ON/OFF the cursor on the histogram of the waveform parameter measurement or queries the current setting.	5-50
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:CURSor:C<x>: VALue?	Queries the measured value of the cursor on the histogram of the waveform parameter measurement.	5-50
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:CURSor:DC?	Queries all settings related to the measurement between cursors on the histogram of the waveform parameter measurement.	5-50
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:CURSor:DC: STATe	Turns ON/OFF the measurement between cursors on the histogram of the waveform parameter measurement or queries the current setting.	5-50
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:CURSor:DC: VALue?	Queries the measured value between cursors on the histogram of the waveform parameter measurement.	5-50
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:CURSor: LINKage	Turns ON/OFF the histogram cursor link of the waveform parameter measurement or queries the current setting.	5-50
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:MODE	Sets the automated measurement mode of the histogram display of the waveform parameter measurement or queries the current setting.	5-51
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:PARAMeter?	Queries all settings related to the automated measurement of histogram parameters of the waveform parameter measurement.	5-51
:ANALysis:WPARAMeter<x>: HISTogram:MEASure:PARAMeter:ALL	Turn ON/OFF all histogram parameters of the waveform parameter measurement.	5-51
:ANALysis:WPARAMeter<x>: HISTogram:MEASure: PARAMeter:<Parameter>?	Queries all settings related to the histogram parameter of the waveform parameter measurement.	5-51
:ANALysis:WPARAMeter<x>: HISTogram:MEASure: PARAMeter:<Parameter>:STATe	Turns ON/OFF the histogram parameter of the waveform parameter measurement or queries the current setting.	5-51
:ANALysis:WPARAMeter<x>: HISTogram:MEASure: PARAMeter:<Parameter>:VALue?	Queries the measured value of the histogram parameter of the waveform parameter measurement.	5-51
:ANALysis:WPARAMeter<x>:LIST?	Queries all settings related to the list display of the waveform parameter measurement.	5-51
:ANALysis:WPARAMeter<x>:LIST: ITEM?	Queries list display items of the waveform parameter measurement.	5-51
:ANALysis:WPARAMeter<x>:LIST: MODE	Sets the list display mode of the waveform parameter measurement or queries the current setting.	5-52
:ANALysis:WPARAMeter<x>:LIST: SCROLL	Sets the scroll direction of the list display of the waveform parameter measurement or queries the current setting.	5-52
:ANALysis:WPARAMeter<x>:LIST: VALue?	Queries the automated measured value of the list display number of the waveform parameter measurement.	5-52
:ANALysis:WPARAMeter<x>:MODE	Sets the mode of the waveform parameter measurement or queries the current setting.	5-52
:ANALysis:WPARAMeter<x>: TRACE<x>?	Queries all settings related to the trace of the waveform parameter measurement.	5-52
:ANALysis:WPARAMeter<x>: TRACE<x>:AREA<x>?	Queries all settings related to the area of the waveform parameter measurement.	5-52
:ANALysis:WPARAMeter<x>: TRACE<x>:AREA<x>:TYPE	Sets the waveform parameter of the waveform parameter measurement or queries the current setting.	5-52

5.1 List of Commands

Commnd	Function	Page
:ANALysis:WPARAMeter<x>:TRENd?	Queries all settings related to the trend display of the waveform parameter measurement.	5-52
:ANALysis:WPARAMeter<x>:TRENd:ASCale[:EXECute]	Executes the auto scaling of the trend display of the waveform parameter measurement.	5-53
:ANALysis:WPARAMeter<x>:TRENd:HRANge	Sets the target window for trend display of measured waveform parameters or queries the current setting.	5-53
:ANALysis:WPARAMeter<x>:TRENd:HSPan	Sets the horizontal span of the trend display of the waveform parameter measurement or queries the current setting.	5-53
:ANALysis:WPARAMeter<x>:TRENd:MEASure?	Queries all settings related to the automated measurement of the trend display of the waveform parameter measurement.	5-53
:ANALysis:WPARAMeter<x>:TRENd:MEASure:CURSor?	Queries all settings related to the cursor measurement of the trend of the waveform parameter measurement.	5-53
:ANALysis:WPARAMeter<x>:TRENd:MEASure:CURSor:ALL	Turns ON/OFF all cursors of the trend of the waveform parameter measurement.	5-53
:ANALysis:WPARAMeter<x>:TRENd:MEASure:CURSor:C<x>?	Queries all settings related to the measured value of the cursor of the trend of the waveform parameter measurement.	5-53
:ANALysis:WPARAMeter<x>:TRENd:MEASure:CURSor:C<x>:POSition	Sets the cursor position of the trend of the waveform parameter measurement or queries the current setting.	5-53
:ANALysis:WPARAMeter<x>:TRENd:MEASure:CURSor:C<x>:STATe	Turns ON/OFF the cursor of the trend of the waveform parameter measurement or queries the current setting.	5-54
:ANALysis:WPARAMeter<x>:TRENd:MEASure:CURSor:C<x>:VALue?	Queries the measured value of the cursor of the trend of the waveform parameter measurement.	5-54
:ANALysis:WPARAMeter<x>:TRENd:MEASure:CURSor:DC?	Queries all settings related to the measurement between cursors on the trend of the waveform parameter measurement.	5-54
:ANALysis:WPARAMeter<x>:TRENd:MEASure:CURSor:DC:STATe	Turns ON/OFF the measurement between cursors on the trend of the waveform parameter measurement or queries the current setting.	5-54
:ANALysis:WPARAMeter<x>:TRENd:MEASure:CURSor:DC:VALue?	Sets the measured value between cursors on the trend of the waveform parameter measurement or queries the current setting.	5-54
:ANALysis:WPARAMeter<x>:TRENd:MEASure:CURSor:LINKage	Turns ON/OFF the trend cursor link of the waveform parameter measurement or queries the current setting.	5-54
:ANALysis:WPARAMeter<x>:TRENd:MEASure:MODE	Sets the automated measurement mode of the trend of the waveform parameter measurement or queries the current setting.	5-54
:ANALysis:WPARAMeter<x>:TRENd:VERTical	Sets the vertical range of the trend of the waveform parameter measurement or queries the current setting.	5-55
:ANALysis:XY<x>?	Queries all settings related to the XY display function.	5-55
:ANALysis:XY<x>:GATE?	Queries all settings related to the gate function of the XY display.	5-55
:ANALysis:XY<x>:GATE:ALEVel	Sets the active level of the gate of the XY display or queries the current setting.	5-55
:ANALysis:XY<x>:GATE:HYSTeresis<x>	Sets the hysteresis of the gate of the XY display or queries the current setting.	5-55
:ANALysis:XY<x>:GATE:LEVel<x>	Sets the level of the gate of the XY display or queries the current setting.	5-55
:ANALysis:XY<x>:GATE:TRACe	Sets the gate trace of the XY display or queries the current setting.	5-55
:ANALysis:XY<x>:MEASure?	Queries all settings related to the automated measurement of the XY display.	5-55
:ANALysis:XY<x>:MEASure:CURSor?	Queries all settings related to the cursor measurement of the XY display.	5-55
:ANALysis:XY<x>:MEASure:CURSor:XLINKage	Turns ON/OFF the ΔV cursor link on the XY display or queries the current setting.	5-55
:ANALysis:XY<x>:MEASure:CURSor:X<x>?	Queries all settings related to the ΔV cursor of the XY display.	5-56
:ANALysis:XY<x>:MEASure:CURSor:X<x>:POSition	Sets the ΔV cursor position of the XY display or queries the current setting.	5-56
:ANALysis:XY<x>:MEASure:CURSor:X<x>:VALue?	Queries the voltage value at the ΔV cursor of the XY display.	5-56
:ANALysis:XY<x>:MEASure:CURSor:YLINKage	Turns ON/OFF the ΔT cursor link on the XY display or queries the current setting.	5-56
:ANALysis:XY<x>:MEASure:CURSor:Y<x>?	Queries all settings related to the ΔT cursor of the XY display.	5-56
:ANALysis:XY<x>:MEASure:CURSor:Y<x>:POSition	Sets the ΔT cursor position of the XY display or queries the current setting.	5-56
:ANALysis:XY<x>:MEASure:CURSor:Y<x>:VALue?	Queries the voltage value at the ΔT cursor of the XY display.	5-56
:ANALysis:XY<x>:MEASure:MODE	Sets the automated measurement mode of the XY display or queries the current setting.	5-56
:ANALysis:XY<x>:MEASure:XYINteg?	Queries all settings related to the integration of the XY display.	5-56

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Commnd	Function	Page
:ANALysis:XY<x>:MEASure:XYINteg:LOOP	Sets the integration mode of the XY display or queries the current setting.	5-57
:ANALysis:XY<x>:MEASure:XYINteg:POLarity	Sets the integration polarity of the XY display or queries the current setting.	5-57
:ANALysis:XY<x>:MEASure:XYINteg:VALue?	Queries the integral value of the XY display.	5-57
:ANALysis:XY<x>:TRANge (Time Range)	Sets the measurement range of the XY display or queries the current setting.	5-57
:ANALysis:XY<x>:WINDow	Sets the measurement source window of the XY display or queries the current setting.	5-57
:ANALysis:XY<x>:XTRace	Sets the X-axis trace of the XY display or queries the current setting.	5-57
:ANALysis:XY<x>:YTRace	Sets the Y-axis trace of the XY display or queries the current setting.	5-57

ASETup Group

:ASETup:EXECute	Execute auto setup.	5-58
:ASETup:UNDO	Cancels auto setup that has been executed.	5-58

CALibrate Group

:CALibrate?	Queries all settings related to the calibration.	5-59
:CALibrate:EXECute	Executes calibration.	5-59
:CALibrate:MODE	Turns ON/OFF the auto calibration or queries the current setting.	5-59

CHANnel Group

:CHANnel<x>?	Queries all settings related to the channel.	5-60
:CHANnel<x>:BWIDth	Sets the input filter of the channel or queries the current setting.	5-60
:CHANnel<x>:COUPling	Sets the input coupling of the channel or queries the current setting.	5-60
:CHANnel<x>:DESKew	Sets the skew correction of the channel or queries the current setting.	5-60
:CHANnel<x>:DISPlay	Turns ON/OFF the display of the channel or queries the current setting.	5-60
:CHANnel<x>:INVert	Turns ON/OFF the inverted display of the channel or queries the current setting.	5-60
:CHANnel<x>:LABel?	Queries all settings related to the waveform label of the channel.	5-60
:CHANnel<x>:LABel[:DEFine]	Sets the waveform label of channel or queries the current setting.	5-60
:CHANnel<x>:LABel:MODE	Turns ON/OFF the waveform label display of the channel or queries the current setting.	5-60
:CHANnel<x>:LSCale?	Queries all the linear scaling settings of a channel.	5-60
:CHANnel<x>:LSCale:AVALue		
:CHANnel<x>:LSCale:BVALue	Sets or queries an offset B value.	5-61
:CHANnel<x>:LSCale:MODE	Sets or queries the on/off status of linear scaling.	5-61
:CHANnel<x>:LSCale:UNIT	Sets or queries a unit that is attached to linear scaling results.	5-61
:CHANnel<x>:OFFSet	Sets the offset voltage of the channel or queries the current setting.	5-61
:CHANnel<x>:POSition	Sets the vertical position of the channel or queries the current setting.	5-61
:CHANnel<x>:PROBe?	Queries all settings related to the probe attenuation of the channel.	5-61
:CHANnel<x>:PROBe[:MODE]	Sets the probe attenuation of the channel or queries the current setting.	5-61
:CHANnel<x>:PROBe:AUTO?	Queries the probe attenuation of the channel when set to AUTO.	5-61
:CHANnel<x>:PZCalibrate[:EXECute]	Execute the zero adjustment of the current probe of the channel.	5-61
:CHANnel<x>:VDIV	Sets the vertical sensitivity (V/div) of the channel or queries the current setting.	5-61

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Commnd	Function	Page
CLear Group		
:CLear	Clears traces.	5-62
COMMunicate Group		
:COMMunicate?	Queries all settings related to communications.	5-63
:COMMunicate:HEADer	Sets whether to add a header to the response to a query (example CHANNEL1:VOLTAGE:PROBE 10) or not add the header (example 10) or queries the current setting.	5-63
:COMMunicate:LOCKout	Sets or clears local lockout.	5-63
:COMMunicate:OPSE (Operation Pending Status Enable register)	Sets the overlap command that is used by the *OPC, *OPC?, and *WAI commands or queries the current setting.	5-63
:COMMunicate:OPSR? (Operation Pending Status Register)	Queries the value of the operation pending status register.	5-63
:COMMunicate:OVERlap	Sets the commands to operate as overlap commands or queries the current setting.	5-63
:COMMunicate:REMOte	Sets remote or local. ON is remote mode.	5-63
:COMMunicate:STATus?	Queries line-specific status.	5-64
:COMMunicate:VERBose	Sets whether to return the response to a query using full spelling (example CHANNEL1:VOLTAGE:PROBE 10) or using abbreviation (example CHAN:PROB 10) or queries the current setting.	5-64
:COMMunicate:WAIT	Waits for one of the specified extended events to occur.	5-64
:COMMunicate:WAIT?	Creates the response that is returned when the specified event occurs.	5-64
CURSor Group		
:CURSor?	Queries all settings related to the cursor measurement.	5-65
:CURSor:DISPlay	Turns ON/OFF the cursor or queries the current setting.	5-65
:CURSor:HORizontal?	Queries all settings related to the ΔV cursors.	5-65
:CURSor:HORizontal:BASic?	Queries all settings related to basic items of the ΔV cursors.	5-65
:CURSor:HORizontal[:BASic]:ALL	Turns ON/OFF all basic items of the ΔV cursors.	5-65
:CURSor:HORizontal[:BASic]:DV?	Queries all settings related to the ΔV measurement of the ΔV cursors.	5-65
:CURSor:HORizontal[:BASic]:DV:STATE	Turns ON/OFF the ΔV measurement of the ΔV cursors or queries the current setting.	5-65
:CURSor:HORizontal[:BASic]:DV:VALue?	Queries the voltage value between the ΔV cursors.	5-65
:CURSor:HORizontal[:BASic]:LINKage	Turns ON/OFF the ΔV cursor link or queries the current setting.	5-65
:CURSor:HORizontal[:BASic]:V<x>?	Queries all settings related to the ΔV cursor.	5-66
:CURSor:HORizontal[:BASic]:V<x>:JUMP	Jumps the ΔV cursor to the center position of the zoom waveform.	5-66
:CURSor:HORizontal[:BASic]:V<x>:POSition	Sets the ΔV cursor position or queries the current setting.	5-66
:CURSor:HORizontal[:BASic]:V<x>:STATE	Turns ON/OFF the ΔV cursor or queries the current setting.	5-66
:CURSor:HORizontal[:BASic]:V<x>:VALue?	Queries the voltage value at the ΔV cursor.	5-66
:CURSor:HORizontal:CALCulation?	Queries all settings related to calculation items of the ΔV cursors.	5-66
:CURSor:HORizontal:CALCulation:ALL	Turns ON/OFF all calculation items of the ΔV cursors.	5-66
:CURSor:HORizontal:CALCulation:DEFine<x>	Sets the equation of the calculation item of the ΔV cursor or queries the current setting.	5-66
:CURSor:HORizontal:CALCulation:STATE<x>	Turns ON/OFF the calculation item of the ΔV cursor or queries the current setting.	5-66
:CURSor:HORizontal:CALCulation:VALue<x>?	Queries the measured value of the calculation item of the ΔV cursor.	5-66
:CURSor:HORizontal:TRACE	Sets the source trace of the ΔV cursor or queries the current setting.	5-67
:CURSor:MARKer?	Queries all settings related to the marker cursors.	5-67
:CURSor:MARKer:CALCulation?	Queries all settings related to calculation items of the marker cursors.	5-67
:CURSor:MARKer:CALCulation:ALL	Turns ON/OFF all calculation items of the marker cursors.	5-67
:CURSor:MARKer:CALCulation:DEFine<x>	Sets the equation of the calculation item of the marker cursors or queries the current setting.	5-67

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Command	Function	Page
:CURSor:MARKer:CALCulation:STATe<x>	Turns ON/OFF the calculation item of the marker cursors or queries the current setting.	5-67
:CURSor:MARKer:CALCulation:VALue<x>?	Queries the measured value of the calculation item of the marker cursors.	5-67
:CURSor:MARKer:CM<x>?	Queries all settings related to the marker cursor.	5-67
:CURSor:MARKer:CM<x>:ALL	Turns ON/OFF all items of the marker cursor.	5-67
:CURSor:MARKer:CM<x>:DT<x>?	Queries all settings related to the ΔT measurement of the cursor marker.	5-67
:CURSor:MARKer:CM<x>:DT<x>:STATe	Turns ON/OFF the ΔT measurement of the maker cursor or queries the current setting.	5-67
:CURSor:MARKer:CM<x>:DT<x>:VALue?	Queries the ΔT value of the marker cursor.	5-67
:CURSor:MARKer:CM<x>:DV<x>?	Queries all settings related to the ΔV measurement of the cursor marker.	5-67
:CURSor:MARKer:CM<x>:DV<x>:STATe	Turns ON/OFF the ΔV measurement of the maker cursor or queries the current setting.	5-68
:CURSor:MARKer:CM<x>:DV<x>:VALue?	Queries the ΔV value of the marker cursor.	5-68
:CURSor:MARKer:CM<x>:JUMP	Jumps the marker cursor to the center position of the zoom waveform.	5-68
:CURSor:MARKer:CM<x>:POSition	Sets the marker cursor position or queries the current setting.	5-68
:CURSor:MARKer:CM<x>:T?	Queries all settings related to the time measurement of the marker cursor.	5-68
:CURSor:MARKer:CM<x>:T:STATe	Turns ON/OFF the time measurement of the maker cursor or queries the current setting.	5-68
:CURSor:MARKer:CM<x>:T:VALue?	Queries the time value at the marker cursor position.	5-68
:CURSor:MARKer:CM<x>:TRACe	Sets the source trace of the marker cursor or queries the current setting.	5-68
:CURSor:MARKer:CM<x>:V?	Queries all settings related to the voltage measurement of the marker cursor.	5-68
:CURSor:MARKer:CM<x>:V:STATe	Turns ON/OFF the voltage measurement of the maker cursor or queries the current setting.	5-68
:CURSor:MARKer:CM<x>:V:VALue?	Queries the voltage value at the marker cursor position.	5-68
:CURSor:MARKer:FORM	Sets the marker cursor form or queries the current setting.	5-68
:CURSor:SERIal?	Queries all settings related to the serial cursors.	5-68
:CURSor:SERIal:SCURsor<x>?	Queries all settings related to the serial cursor.	5-69
:CURSor:SERIal:SCURsor<x>:ACTive	Sets the active level of the serial cursor or queries the current setting.	5-69
:CURSor:SERIal:SCURsor<x>:BCount	Sets the bit length of the serial cursor or queries the current setting.	5-69
:CURSor:SERIal:SCURsor<x>:BITRate	Sets the bit rate of the serial cursor or queries the current setting.	5-69
:CURSor:SERIal:SCURsor<x>:BITorder	Sets the bit order of the serial cursor or queries the current setting.	5-69
:CURSor:SERIal:SCURsor<x>:FORMat	Sets the display format of the serial cursor or queries the current setting.	5-69
:CURSor:SERIal:SCURsor<x>:HYSTeresis	Sets the hysteresis of the serial cursor or queries the current setting.	5-69
:CURSor:SERIal:SCURsor<x>:JUMP	Moves the serial cursor to the specified direction.	5-69
:CURSor:SERIal:SCURsor<x>:LEVel	Sets the threshold level of the serial cursor or queries the current setting.	5-69
:CURSor:SERIal:SCURsor<x>:MODE	Turns ON/OFF the serial cursor or queries the current setting.	5-69
:CURSor:SERIal:SCURsor<x>:POSition	Sets the serial cursor position or queries the current setting.	5-70
:CURSor:SERIal:SCURsor<x>:TRACe	Sets the trace of the serial cursor or queries the current setting.	5-70
:CURSor:SERIal:SCURsor<x>:TRACK	Jumps the serial cursor onto the zoom waveform.	5-70
:CURSor:SERIal:SCURsor<x>:VALue?	Queries the measured value of the serial cursor.	5-70
:CURSor:TYPE	Sets the cursor type or queries the current setting.	5-70
:CURSor:VERTical?	Queries all settings related to the ΔT cursors.	5-70
:CURSor:VERTical:BASic?	Queries all settings related to basic items of the ΔT cursors.	5-70
:CURSor:VERTical[:BASic]:ALL	Turns ON/OFF all basic items of the ΔT cursors.	5-70
:CURSor:VERTical[:BASic]:DT?	Queries all settings related to the ΔT measurement of the ΔT cursors.	5-70
:CURSor:VERTical[:BASic]:DT:STATe	Turns ON/OFF the ΔT measurement of the ΔT cursors or queries the current setting.	5-70
:CURSor:VERTical[:BASic]:DT:VALue?	Queries the ΔT value of the ΔT cursors.	5-70

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Commnd	Function	Page
:CURSor:VERTical[:BASic]:LINKage	Turns ON/OFF the ΔT cursor link or queries the current setting.	5-70
:CURSor:VERTical[:BASic]:PERDt?	Queries all settings related to the $1/\Delta T$ measurement of the ΔT cursors.	5-70
:CURSor:VERTical[:BASic]:PERDt:STATe	Turns ON/OFF the $1/\Delta T$ measurement of the ΔT cursors or queries the current setting.	5-71
:CURSor:VERTical[:BASic]:PERDt:VALue?	Queries the $1/\Delta T$ value of the ΔT cursors.	5-71
:CURSor:VERTical[:BASic]:T<x>?	Queries all settings related to the ΔT cursor.	5-71
:CURSor:VERTical[:BASic]:T<x>:JUMP	Jumps to the center position of the zoom waveform of the ΔT cursor.	5-71
:CURSor:VERTical[:BASic]:T<x>:POSition	Sets the ΔT cursor position or queries the current setting.	5-71
:CURSor:VERTical[:BASic]:T<x>:STATe	Turns ON/OFF the ΔT cursor or queries the current setting.	5-71
:CURSor:VERTical[:BASic]:T<x>:VALue?	Queries the time value at the ΔT cursor.	5-71
:CURSor:VERTical:CALCulation?	Queries all settings related to calculation items of the ΔT cursors.	5-71
:CURSor:VERTical:CALCulation:ALL	Turns ON/OFF all calculation items of the ΔT cursors.	5-71
:CURSor:VERTical:CALCulation:DEFine<x>	Sets the equation of the calculation item of the ΔT cursor or queries the current setting.	5-71
:CURSor:VERTical:CALCulation:STATe<x>	Turns ON/OFF the calculation item of the ΔT cursor or queries the current setting.	5-71
:CURSor:VERTical:CALCulation:VALue<x>?	Queries the measured value of the calculation item of the ΔT cursor.	5-71
:CURSor:VT?	Queries all settings related to the VT cursor.	5-72
:CURSor:VT:BASic?	Queries all settings related to basic items of the VT cursor.	5-72
:CURSor:VT[:BASic]:ALL	Turns ON/OFF all basic items of the VT cursor.	5-72
:CURSor:VT[:BASic]:GROup<x>?	Queries all settings related to the logic group of the VT cursor.	5-72
:CURSor:VT[:BASic]:GROup<x>:BITOrder	Sets the measurement bit order of the logic group of the VT cursor or queries the current setting.	5-72
:CURSor:VT[:BASic]:GROup<x>:FORMat	Sets the display format of the measured value of the logic group of the VT cursor or queries the current setting.	5-72
:CURSor:VT[:BASic]:GROup<x>:STATe	Turns ON/OFF the measured value of the logic group of the VT cursor or queries the current setting.	5-72
:CURSor:VT[:BASic]:GROup<x>:VALue?	Queries the measured value of the logic group of the VT cursor.	5-72
:CURSor:VT[:BASic]:POSition	Sets the VT cursor position or queries the current setting.	5-72
:CURSor:VT[:BASic]:T?	Queries all settings related to the time value of the VT cursor.	5-72
:CURSor:VT[:BASic]:T:STATe	Turns ON/OFF the time value of the VT cursor or queries the current setting.	5-72
:CURSor:VT[:BASic]:T:VALue?	Queries the time value at the VT cursor.	5-72
:CURSor:VT[:BASic]:V<x>?	Queries all settings related to the voltage value of the VT cursor.	5-72
:CURSor:VT[:BASic]:V<x>:STATe	Turns ON/OFF the voltage value of the VT cursor or queries the current setting.	5-72
:CURSor:VT[:BASic]:V<x>:VALue?	Queries the voltage value at the VT cursor.	5-73
:CURSor:VT:CALCulation?	Queries all settings related to calculation items of the VT cursor.	5-73
:CURSor:VT:CALCulation:ALL	Turns ON/OFF all calculation items of the VT cursor.	5-73
:CURSor:VT:CALCulation:DEFine<x>	Sets the equation of the calculation item of the VT cursor or queries the current setting.	5-73
:CURSor:VT:CALCulation:STATe<x>	Turns ON/OFF the calculation item of the VT cursor or queries the current setting.	5-73
:CURSor:VT:CALCulation:VALue<x>?	Queries the measured value of the calculation item of the VT cursor.	5-73
:CURSor:VT:JUMP	Jumps the VT cursor to the center position of the zoom waveform.	5-73

Commnd	Function	Page
DISPlay Group		
:DISPlay?	Queries all settings related to the display.	5-74
:DISPlay:ACCumulate?	Queries all settings related to the accumulated display of waveforms.	5-74
:DISPlay:ACCumulate:GRADe	Sets the accumulate mode or queries the current setting.	5-74
:DISPlay:ACCumulate:MODE	Turns ON/OFF the accumulate mode or queries the current setting.	5-74
:DISPlay:ACCumulate: PERSistence?	Queries all settings related to persistence.	5-74
:DISPlay:ACCumulate: PERSistence:COUNT	Sets the persistence count or queries the current setting.	5-74
:DISPlay:ACCumulate: PERSistence:MODE	Sets the persistence mode or queries the current setting.	5-74
:DISPlay:ACCumulate: PERSistence:TIME	Sets the persistence time or queries the current setting.	5-74
:DISPlay:BLIGht?	Queries all settings related to the backlight.	5-74
:DISPlay:BLIGht:AUTOoff	Sets the function that automatically turns the backlight off or queries the current setting.	5-74
:DISPlay:BLIGht:BRIGhtness	Sets the brightness of the backlight or queries the current setting.	5-74
:DISPlay:BLIGht:LCD	Turns ON/OFF the backlight or queries the current setting.	5-75
:DISPlay:BLIGht:TIMEout	Sets the timeout of the backlight or queries the current setting.	5-75
:DISPlay:COLor?	Queries all settings related to the waveform display color.	5-75
:DISPlay:COLor:{CHANnel<x> LOGic LState MATH<x> REFerence<x>}	Sets the color of the waveform or queries the current setting.	5-75
:DISPlay:FORMat	Sets the display format or queries the current setting.	5-75
:DISPlay:GRATicule	Sets the graticule (grid) or queries the current setting.	5-75
:DISPlay:INTENSity?	Queries all settings related to the intensity of the displayed items.	5-75
:DISPlay:INTENSity[:WAVEform]	Sets the intensity of the waveform or queries the current setting.	5-75
:DISPlay:INTENSity:{CURSor GRID MARKer ZBOX}	Sets the intensity of the display item or queries the current setting.	5-75
:DISPlay:INTERpolate	Sets the display interpolation format or queries the current setting.	5-75
:DISPlay:MAPPING?	Queries all settings related to the waveform mapping to the split screen.	5-75
:DISPlay:MAPPING[:MODE]	Sets the waveform mapping mode for the split screen or queries the current setting.	5-76
:DISPlay:MAPPING:TRACe<x>	Sets the mapping of the waveform to the split screen or queries the current setting.	5-76
:DISPlay:SVALue (Scale VALUE)	Sets or queries the on/off status of the scale value display.	5-76
:DISPlay:TRANslucent	Turns ON/OFF the translucent mode or queries the current setting.	5-76

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Commnd	Function	Page
FILE Group		
:FILE?	Queries all settings related to the specified storage medium or internal memory.	5-77
:FILE:DIReCtory?	Queries all settings related to the specified storage medium.	5-77
:FILE[:DIReCtory]:CDIReCtory (Change Directory)	Sets the current directory or queries the current setting.	5-77
:FILE[:DIReCtory]:FREe?	Queries the free disk space in bytes on the specified storage medium.	5-77
:FILE[:DIReCtory]:MDIReCtory (Make Directory)	Creates a directory under the specified directory. This is an overlap command.	5-77
:FILE:INteRnal?	Queries all settings related to the internal memory.	5-77
:FILE:INteRnal:RECaLL:SEtUp[:EXECute]	Executes the loading of the setup data from the internal memory. This is an overlap command.	5-77
:FILE:INteRnal:STORe?	Queries all settings related to the saving to the internal memory.	5-77
:FILE:INteRnal:STORe:SEtUp?	Queries all settings related to the saving of the setup data to the internal memory.	5-77
:FILE:INteRnal:STORe:SEtUp:COMMeNt<x>	Sets the comment to the setup data to be saved to the internal memory or queries the current setting.	5-78
:FILE:INteRnal:STORe:SEtUp:DATE<x>?	Queries the date/time when the setup data was saved to the internal memory.	5-78
:FILE:INteRnal:STORe:SEtUp[:EXECute]	Executes the saving of the setup data to the internal memory. This is an overlap command.	5-78
:FILE:INteRnal:STORe:SEtUp:LOCK<x>	Turns ON/OFF the read-only attribute of the setup data in the internal memory or queries the current setting.	5-78
:FILE:LOAD?	Queries all settings related to the loading of files on the specified storage medium.	5-78
:FILE:LOAD:{BINaRy ZPOLYgon ZWAve}?	Queries all settings related to the loading of specific data.	5-78
:FILE:LOAD:{BINaRy MASK SEtUp SNAP SYMBol ZPOLYgon ZWAve}:ABORt	Aborts the loading of specific data.	5-78
:FILE:LOAD:{BINaRy MASK SEtUp SNAP SYMBol ZPOLYgon ZWAve}[:EXECute]	Executes the loading of specific data. This is an overlap command.	5-78
:FILE:LOAD:BINaRy:REFeRence	Sets the load destination of the binary data or queries the current setting.	5-78
:FILE:LOAD:{ZPOLYgon ZWAve}:ZONE	Sets the load destination of the zone data of specific data or queries the current setting.	5-78
:FILE:SAVe?	Queries all settings related to the saving of data.	5-78
:FILE:SAVe:{AHISTogram ASCIi BINaRy FFT FLOat SBUS ZWAve}?	Queries all settings related to the saving of specific data.	5-79
:FILE:SAVe:{AHISTogram ASCIi BINaRy FFT FLOat SEtUp SBUS SNAP WPARameter ZWAve}:ABORt	Aborts the save operation of specific data.	5-79
:FILE:SAVe:{AHISTogram ASCIi BINaRy FFT FLOat SEtUp SBUS SNAP WPARameter ZWAve}[:EXECute]	Executes the saving of specific data by specifying a file name. This is an overlap command.	5-79
:FILE:SAVe:{AHISTogram FFT SBUS}:ANALYsis	Sets the trace of specific data to be saved or queries the current setting.	5-79
:FILE:SAVe:ANAMing	Sets the type of auto naming of file names of the saved data or queries the current setting.	5-79
:FILE:SAVe:{ASCIi BINaRy FLOat}:COMPreSSion	Sets the compression method for saving specific data or queries the current setting.	5-79
:FILE:SAVe:{ASCIi BINaRy FLOat}:HISTory	Sets whether to save the entire data or the selected data of specific data or queries the current setting.	5-79
:FILE:SAVe:{ASCIi BINaRy FLOat}:LENGth	Sets the size of waveform data to save for each type of data or queries the current setting.	5-79
:FILE:SAVe:ASCIi:RANGe	Sets the ASCII data saving range or queries the current setting.	5-80
:FILE:SAVe:{ASCIi BINaRy FLOat}:TRACe	Sets the trace of specific data to be saved or queries the current setting.	5-80
:FILE:SAVe:COMMeNt	Sets the comment of data to be saved or queries the current setting.	5-80
:FILE:SAVe:NAME	Sets the name of the data file to be saved or queries the current setting.	5-80
:FILE:SAVe:ZWAve:ZONE	Sets the zone of the zone data to be saved or queries the current setting.	5-80

Commnd	Function	Page
GONogo Group		
:GONogo?	Queries all settings related to GO/NO-GO determination.	5-81
:GONogo:ABORT	Aborts the GO/NO-GO determination.	5-81
:GONogo:ACTioN?	Queries all settings related to the action taken when the determination result is NO-GO and the criteria values.	5-81
:GONogo:ACTioN:BUZZer	Sets whether to sound a buzzer when the determination result is NO-GO or queries the current setting.	5-81
:GONogo:ACTioN:HCOPy	Sets whether to print the screen image on the printer when the determination result is NO-GO or queries the current setting.	5-81
:GONogo:ACTioN:MAIL?	Queries all settings related to the mail transmission when the determination is NO-GO.	5-81
:GONogo:ACTioN:MAIL:INTerval	Sets the interval at which to send mail when the determination is NO-GO or queries the current setting.	5-81
:GONogo:ACTioN:MAIL:MODE	Sets whether to send mail when the determination is NO-GO or queries the current setting.	5-81
:GONogo:ACTioN:SAVE	Sets whether to save the waveform data to the storage medium when the determination result is NO-GO or queries the current setting.	5-81
:GONogo:CONDition<x>	Sets the GO/NO-GO determination criteria or queries the current setting.	5-81
:GONogo:COUNt?	Queries the actual number of GO/NO-GO determinations.	5-81
:GONogo:EXECute	Executes the GO/NO-GO determination. This is an overlap command.	5-81
:GONogo:LOGic	Sets the GO/NO-GO determination logic or queries the current setting.	5-81
:GONogo:MODE	Sets the GO/NO-GO determination type or queries the current setting.	5-82
:GONogo:NGCount?	Queries the actual number of NO-GOs of the GO/NO-GO determination.	5-82
:GONogo:SCONdition? (Stop Condition)	Queries all settings related to the determination termination condition.	5-82
:GONogo[:SCONdition]:NGCount	Sets the number of NO-GOs that terminates the GO/NO-GO determination or queries the current setting.	5-82
:GONogo[:SCONdition]:STOPcount	Sets the acquisition count that terminates the GO/NO-GO determination or queries the current setting.	5-82
:GONogo:TELEcomtest?	Queries all settings related to mask test determination.	5-82
:GONogo:TELEcomtest:SElect<x>?	Queries all settings related to the condition of the mask test determination.	5-82
:GONogo:TELEcomtest:SElect<x>: EYEPattern?	Queries all settings related to the eye pattern determination of the condition.	5-82
:GONogo:TELEcomtest:SElect<x>: EYEPattern:<Parameter>	Sets the upper and lower limits of the waveform parameter of the eye pattern determination or queries the current setting.	5-82
:GONogo:TELEcomtest:SElect<x>: MASK?	Queries all settings related to the mask determination of the condition.	5-82
:GONogo:TELEcomtest:SElect<x>: MASK:ELEMeNt<x>?	Queries all settings related to the element used in the mask determination.	5-82
:GONogo:TELEcomtest:SElect<x>: MASK:ELEMeNt<x>:PSPCount (Sample Point Count %)	Sets the upper and lower limits of the error rate for the number of sampled data points of the element or queries the current setting.	5-83
:GONogo:TELEcomtest:SElect<x>: MASK:ELEMeNt<x>:PWCount (Wave Count %)	Sets the upper and lower limits of the error rate for the number of acquisitions of the element or queries the current setting.	5-83
:GONogo:TELEcomtest:SElect<x>: MASK:ELEMeNt<x>:SPCount (Sample Point Count)	Sets the upper and lower limits of the number of sampled data points for the element that results in error or queries the current setting.	5-83
:GONogo:TELEcomtest:SElect<x>: MASK:ELEMeNt<x>:WCount (Wave Count)	Sets the upper and lower limits of the number of acquisitions for the element that results in error or queries the current setting.	5-83
:GONogo:ZPARAMeter?	Queries all settings related to zone/parameter determination.	5-83
:GONogo:ZPARAMeter:SElect<x>?	Queries all settings related to the condition of the zone/parameter determination.	5-83
:GONogo:ZPARAMeter:SElect<x>: MODE	Sets the mode of the condition or queries the current setting.	5-84
:GONogo:ZPARAMeter:SElect<x>: PARAMeter?	Queries all settings related to the condition parameter.	5-84
:GONogo:ZPARAMeter:SElect<x>: PARAMeter:CATEGORY	Sets the parameter category or queries the current setting.	5-84
:GONogo:ZPARAMeter:SElect<x>: PARAMeter:FFT<x>?	Queries all settings related to the FFT determination.	5-84

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Commnd	Function	Page
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:FFT<x>:CALCulation<x>	Sets the upper and lower limits of the calculation item of the FFT determination or queries the current setting.	5-84
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:FFT<x>:PEAK?	Queries all settings related to the peak value of the FFT determination.	5-84
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:FFT<x>:PEAK: DFREquency	Sets the upper and lower limits between the peak frequencies of the FFT determination or queries the current setting.	5-84
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:FFT<x>:PEAK:DV	Sets the upper and lower limits between the peak voltages of the FFT determination or queries the current setting.	5-85
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:FFT<x>:PEAK: FREquency<x>	Sets the upper and lower limits of the peak frequency of the FFT determination or queries the current setting.	5-85
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:FFT<x>:PEAK:V<x>	Sets the upper and lower limits of the peak voltage of the FFT determination or queries the current setting.	5-85
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:MEASure?	Queries all settings related to the determination using automated measurement of waveform parameters (measure determination).	5-85
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:MEASure:BIT<x>?	Queries all settings related to each logic bit of measure determination.	5-85
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:MEASure:BIT<x>: AREA<x>?	Queries all settings related to each area of measure determination.	5-85
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:MEASure:BIT<x>: AREA<x>:TYPE?	Queries all settings related to logic waveform parameters of measure determination.	5-86
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:MEASure:BIT<x>: AREA<x>:TYPE:<parameter>	Sets the upper and lower limits of the logic waveform of measure determination or queries the current setting.	5-86
:GONogo:ZPArAmeter: SElect<x>:PARAmeter:MEASure: CALCulation<x>	Sets the upper and lower limits of the calculation item of the measure determination or queries the current setting.	5-86
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:MEASure:STATistics	Sets the statistical value of the measure determination or queries the current setting.	5-86
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:MEASure:TRACe<x>?	Queries all settings related to the trace of the measure determination.	5-86
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:MEASure:TRACe<x>: AREA<x>?	Queries all settings related to the area of the measure determination.	5-87
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:MEASure:TRACe<x>: AREA<x>:TYPE?	Queries all settings related to the waveform parameters of the measure determination.	5-87
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:MEASure:TRACe<x>: AREA<x>:TYPE:<Parameter>	Sets the upper and lower limits of the waveform parameter of the measure determination or queries the current setting.	5-87
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:XY<x>?	Queries all settings related to the XY determination.	5-87
:GONogo:ZPArAmeter:SElect<x>: PARAmeter:XY<x>:XYINtegr	Sets the upper and lower limits integral value of the XY determination or queries the current setting.	5-88
:GONogo:ZPArAmeter:SElect<x>: RECTangle?	Queries all settings related to the rectangle determination.	5-88
:GONogo:ZPArAmeter:SElect<x>: RECTangle:HORizontal	Sets the horizontal position of the rectangle used in the rectangle determination or queries the current setting.	5-88
:GONogo:ZPArAmeter:SElect<x>: RECTangle:VERTical	Sets the vertical position of the rectangle used in the rectangle determination or queries the current setting.	5-88
:GONogo:ZPArAmeter:SElect<x>: TRACe	Sets the source trace of the zone/parameter determination or queries the current setting.	5-88
:GONogo:ZPArAmeter:SElect<x>: WAVE?	Queries all settings related to the wave determination.	5-88
:GONogo:ZPArAmeter:SElect<x>: WAVE:EDIT<x>:EXIT	Exits the edit menu of the wave determination zone.	5-88
:GONogo:ZPArAmeter:SElect<x>: WAVE:EDIT<x>:PART	Editing the portion of the zone of the wave determination.	5-89
:GONogo:ZPArAmeter:SElect<x>: WAVE:EDIT<x>:WHOLe	Sets the editing of the entire zone of the waveform zone.	5-89
:GONogo:ZPArAmeter:SElect<x>: WAVE:TRANge	Sets the determination range of the zone determination or queries the current setting.	5-89

Commnd	Function	Page
:GONogo:ZPARAMeter:SElect<x>: WINDow	Sets the source window of the zone determination or queries the current setting.	5-89

HCOPY Group

:HCOPY? (Hard COPY)	Queries all settings related to the output of screen data.	5-90
:HCOPY:ABORT	Aborts data output and paper feeding.	5-90
:HCOPY:DIRection	Sets the data output destination or queries the current setting.	5-90
:HCOPY:EXECute	Executes the data output. This is an overlap command.	5-90
:HCOPY:EXTPrinter?	Queries all settings related to the external printer output.	5-90
:HCOPY:EXTPrinter:TONE	Sets the half tone of the external printer output or queries the current setting.	5-90
:HCOPY:EXTPrinter:TYPE	Sets the type of output commands to send to the external printer or queries the current setting.	5-90
:HCOPY:FILE?	Queries all settings related to file output.	5-90
:HCOPY:FILE:FORMat	Sets the file output image format or queries the current setting.	5-90
:HCOPY:FILE:SAVE?	Queries all settings related to the saving of file output.	5-90
:HCOPY:FILE:SAVE:ANAMing	Sets the type of auto naming of save destination file names or queries the current setting.	5-90
:HCOPY:FILE:SAVE:CDIRectory (Change Directory)	Sets the save destination directory name or queries the current setting.	5-91
:HCOPY:FILE:SAVE:NAME	Sets the save destination file name or queries the current setting.	5-91
:HCOPY:NETPrint?	Queries all settings related to network printer output or queries the current setting.	5-91
:HCOPY:NETPrint:TONE	Sets the half tone for the network printer or queries the current setting.	5-91
:HCOPY:NETPrint:TYPE	Sets the output command type for the network printer or queries the current setting.	5-91
:HCOPY:PRINter?	Queries all settings related to the built-in printer output.	5-91
:HCOPY:PRINter:HRMode	Turns ON/OFF the high resolution mode of the built-in printer output or queries the current setting.	5-91

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Commnd	Function	Page
HISTory Group		
:HISTory?	Queries all settings related to the history function.	5-92
:HISTory:CURRent?	Queries all settings related to the history function of the current waveform (CH1 to 4, M1 to 8).	5-92
:HISTory[:CURRent]:DISPlay	Sets the start number and end number of the display record of the history waveform or queries the current setting.	5-92
:HISTory[:CURRent]:DMODE (Display Mode)	Sets the display mode of the history waveform or queries the current setting.	5-92
:HISTory[:CURRent]:MODE	Sets the highlight display mode of the history waveform or queries the current setting.	5-92
:HISTory[:CURRent]:RECORD	Sets the target record of the history waveform or queries the current setting.	5-92
:HISTory[:CURRent]:RECORD? MINimum	Queries the minimum record number of the history waveform.	5-92
:HISTory[:CURRent]:REPLay?	Queries all settings related to the replay function of the history function.	5-92
:HISTory[:CURRent]:REPLay:JUMP	Jumps the history waveform to the specified record number.	5-92
:HISTory[:CURRent]:REPLay:SPEEd	Sets the replay speed of the history waveform or queries the current setting.	5-92
:HISTory[:CURRent]:REPLay:STARt	Starts the replay of the history waveform in the specified direction.	5-93
:HISTory[:CURRent]:REPLay:STOP	Stops the replay of the history waveform.	5-93
:HISTory[:CURRent]:SEARCh?	Queries all settings related to the history search function.	5-93
:HISTory[:CURRent][:SEARCh]: ABORT	Aborts the history search.	5-93
:HISTory[:CURRent][:SEARCh]: EXECute	Executes the history search. This is an overlap command.	5-93
:HISTory[:CURRent][:SEARCh]: LOGic	Sets the history search logic or queries the current setting.	5-93
:HISTory[:CURRent][:SEARCh]: RESet	Resets the search conditions of the history search.	5-93
:HISTory[:CURRent][:SEARCh]: SELEct<x>?	Queries all settings related to the history search condition.	5-93
:HISTory[:CURRent][:SEARCh]: SELEct<x>:CONDition	Sets determination criteria of the history search condition or queries the current setting.	5-93
:HISTory[:CURRent][:SEARCh]: SELEct<x>:MODE	Sets the mode of the history search condition or queries the current setting.	5-93
:HISTory[:CURRent][:SEARCh]: SELEct<x>:PARAmeter?	Queries all settings related to the parameter of the history search condition.	5-93
:HISTory[:CURRent][:SEARCh]: SELEct<x>:PARAmeter:CATEgory	Sets the parameter category or queries the current setting.	5-93
:HISTory[:CURRent][:SEARCh]: SELEct<x>:PARAmeter:FFT<x>?	Queries all settings related to the FFT search.	5-94
:HISTory[:CURRent][:SEARCh]: SELEct<x>:PARAmeter:FFT<x>: CALCulation<x>	Sets the upper and lower limits of the calculation item of the FFT search or queries the current setting.	5-94
:HISTory[:CURRent][:SEARCh]: SELEct<x>:PARAmeter:FFT<x>: PEAK?	Queries all settings related to the peak value of the FFT search.	5-94
:HISTory[:CURRent][:SEARCh]: SELEct<x>:PARAmeter:FFT<x>: PEAK:DFREquency	Sets the upper and lower limits between the peak frequencies of the FFT search or queries the current setting.	5-94
:HISTory[:CURRent][:SEARCh]: SELEct<x>:PARAmeter:FFT<x>: PEAK:DV	Sets the upper and lower limits between the peak voltages of the FFT search or queries the current setting.	5-94
:HISTory[:CURRent][:SEARCh]: SELEct<x>:PARAmeter:FFT<x>: PEAK:FREquency<x>	Sets the upper and lower limits of the peak frequency of the FFT search or queries the current setting.	5-95
:HISTory[:CURRent][:SEARCh]: SELEct<x>:PARAmeter:FFT<x>: PEAK:V<x>	Sets the upper and lower limits of the peak voltage of the FFT search or queries the current setting.	5-95
:HISTory[:CURRent][:SEARCh]: SELEct<x>:PARAmeter:MEASure?	Queries all settings related to the search using automated measurement of waveform parameters (measure search).	5-95
:HISTory[:CURRent][:SEARCh]: SELEct<x>:PARAmeter:MEASure: BIT<x>?	Queries all settings related to each logic bit of measure search.	5-95

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Commnd	Function	Page
:HISTory[:CURRent][:SEARch]: SElect<x>:PARAmeter:MEASure: BIT<x>:AREA<x>?	Queries all settings related to each area of measure search.	5-95
:HISTory[:CURRent][:SEARch]: SElect<x>:PARAmeter:MEASure: BIT<x>:AREA<x>:TYPE?	Queries all settings related to logic waveform parameters of measure search.	5-95
:HISTory[:CURRent][:SEARch]: SElect<x>:PARAmeter:MEASure: BIT<x>:AREA<x>:TYPE:<parameter>	Sets the upper and lower limits of the logic waveform of measure search or queries the current setting.	5-96
:HISTory[:CURRent][:SEARch]: SElect<x>:PARAmeter:MEASure: CALCulation<x>	Sets the upper and lower limits of the calculation item of the measure search or queries the current setting.	5-96
:HISTory[:CURRent][:SEARch]: SElect<x>:PARAmeter:MEASure: TRACe<x>?	Queries all settings related to the trace of the measure search.	5-96
:HISTory[:CURRent][:SEARch]: SElect<x>:PARAmeter:MEASure: TRACe<x>:AREA<x>?	Queries all settings related to the area of the measure search.	5-96
:HISTory[:CURRent][:SEARch]: SElect<x>:PARAmeter:MEASure: TRACe<x>:AREA<x>:TYPE?	Queries all settings related to the waveform parameters of the measure search.	5-96
:HISTory[:CURRent][:SEARch]: SElect<x>:PARAmeter: MEASure:TRACe<x>:AREA<x>: TYPE:<Parameter>	Sets the upper and lower limits of the waveform parameter of the measure search or queries the current setting.	5-97
:HISTory[:CURRent][:SEARch]: SElect<x>:PARAmeter:XY<x>?	Queries all settings related to the XY search.	5-97
:HISTory[:CURRent][:SEARch]: SElect<x>:PARAmeter:XY<x>: XYINteg	Sets the upper and lower limits integral value of the XY search or queries the current setting.	5-97
:HISTory[:CURRent][:SEARch]: SElect<x>:RECTangle?	Queries all settings related to the rectangle search.	5-97
:HISTory[:CURRent][:SEARch]: SElect<x>:RECTangle:HORizontal	Sets the horizontal position of the rectangle used in the rectangle search or queries the current setting.	5-97
:HISTory[:CURRent][:SEARch]: SElect<x>:RECTangle:VERTical	Sets the vertical position of the rectangle used in the rectangle search or queries the current setting.	5-98
:HISTory[:CURRent][:SEARch]: SElect<x>:TRACe	Sets the source trace of the history search or queries the current setting.	5-98
:HISTory[:CURRent][:SEARch]: SElect<x>:WAVE?	Queries all settings related to the search in the waveform zone (wave search).	5-98
:HISTory[:CURRent][:SEARch]: SElect<x>:WAVE:EDIT<x>:EXIT	Exits the zone edit menu of the wave search.	5-98
:HISTory[:CURRent][:SEARch]: SElect<x>:WAVE:EDIT<x>:PART	Sets the editing of the portion of the zone of the wave search.	5-98
:HISTory[:CURRent][:SEARch]: SElect<x>:WAVE:EDIT<x>:WHOLe	Sets the editing of the entire zone of the wave search.	5-98
:HISTory[:CURRent][:SEARch]: SElect<x>:WAVE:TRANge	Sets the range over which to perform the wave search or queries the current setting.	5-98
:HISTory[:CURRent][:SEARch]: SElect<x>:WINDow	Sets the source window of the history search or queries the current setting.	5-99
:HISTory[:CURRent]:TIME?	Queries the time of the source record number of the history waveform.	5-99
:HISTory:REFeRence<x>?	Queries all settings related to the history function of the reference.	5-99
:HISTory:REFeRence<x>:DMODE (Display Mode)	Sets the display mode of the history waveform of the reference or queries the current setting.	5-99
:HISTory:REFeRence<x>:MODE	Sets the highlight display mode of the history waveform of the reference or queries the current setting.	5-99
:HISTory:REFeRence<x>:RECOrd	Sets the source record of the history waveform of the reference or queries the current setting.	5-99

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Commnd	Function	Page
:HISTory:REFeRence<x>:RECOrd? MINimum	Queries the minimum record number of the history waveform of the reference.	5-99
:HISTory:REFeRence<x>:REPLay?	Queries all settings related to the replay function of the history function of the reference.	5-99
:HISTory:REFeRence<x>:REPLay: JUMP	Jumps to the specified record number of the history waveform of the reference.	5-99
:HISTory:REFeRence<x>:REPLay: SPEEd	Sets the replay speed of the history waveform of the reference or queries the current setting.	5-99
:HISTory:REFeRence<x>:REPLay: START	Starts the replay of the history waveform of the reference.	5-100
:HISTory:REFeRence<x>:REPLay: STOP	Stops the replay of the history waveform of the reference.	5-100
:HISTory:REFeRence<x>:TIME?	Queries the time of the source record number of the reference waveform.	5-100

IMAGe Group

:IMAGe?	Queries all settings related to the output of screen image data.	5-101
:IMAGe:FORMat	Sets the output format of the screen image data or queries the current setting.	5-101
:IMAGe:SEND?	Queries the screen image data.	5-101
:IMAGe:TONE	Sets the tone of the screen image data or queries the current setting.	5-101

INITialize Group

:INITialize:EXECute	Execute the initialization.	5-102
:INITialize:UNDO	Cancels the initialization that was executed.	5-102

Commnd	Function	Page
LOGIC Group		
:LOGic?	Queries all settings related to the logic.	5-103
:LOGic:AWINdow?	Queries all settings related to analog waveform display.	5-103
:LOGic:AWINdow[:DISPlay]	Turns ON/OFF the analog waveform display or queries the current setting.	5-103
:LOGic:AWINdow:RATio	Sets the analog waveform display ratio or queries the current setting.	5-103
:LOGic:DESKew	Sets the skew correction of the logic signal or queries the current setting.	5-103
:LOGic:GROup<x>?	Queries all settings related to the logic group.	5-103
:LOGic:GROup<x>:BUNDle?	Queries all settings related to the bundle of the logic group.	5-103
:LOGic:GROup<x>:BUNDle:FORMat	Sets the display format (bus display) of the bundled value of the logic group or queries the current setting.	5-103
:LOGic:GROup<x>:BUNDle:MODE	Sets the bundle mode of the logic group or queries the current setting.	5-103
:LOGic:GROup<x>:BUNDle:SYMBol	Sets the symbol item of the bundle value of each logic group.	5-103
:LOGic:GROup<x>:DISPlay	Turns ON/OFF the display of the logic group or queries the current setting.	5-103
:LOGic:GROup<x>:MAPPing	Sets the bit mapping of the logic group or queries the current setting.	5-104
:LOGic:GROup<x>:ORDer	Sets the displayed order of the logic group or queries the current setting.	5-104
:LOGic:GROup<x>:STATe	Turns ON/OFF the state display of the logic group or queries the current setting.	5-104
:LOGic:LABel?	Queries all settings related to the label of the logic signal.	5-104
:LOGic:LABel:BNAME?	Queries all settings related to the bit name of the logic signal.	5-104
:LOGic:LABel:BNAME:{A<x> B<x> C<x> D<x>}	Sets the bit name of the logic signal or queries the current setting.	5-104
:LOGic:LABel:LNAME?	Queries all settings related to the group name of the logic signal.	5-104
:LOGic:LABel:LNAME:GROup<x>	Sets the group name of the logic signal or queries the current setting.	5-104
:LOGic:LABel:MODE	Turns ON/OFF the logic signal label or queries the current setting.	5-104
:LOGic:MODE	Turns ON/OFF the logic signal or queries the current setting.	5-104
:LOGic:POSition	Sets the vertical position of the logic signal or queries the current setting.	5-104
:LOGic:SCLock?	Queries all settings related to the state clock of the logic signal.	5-105
:LOGic:SCLock:POLarity	Sets the state clock polarity of the logic signal or queries the current setting.	5-105
:LOGic:SCLock:SOURce	Sets the state clock source of the logic signal or queries the current setting.	5-105
:LOGic:SIZE	Sets the display size of the logic signal or queries the current setting.	5-105
:LOGic:THReshold?	Queries all settings related to the threshold level of the logic signal.	5-105
:LOGic:THReshold:{PODA PODB PODC PODD}?	Queries all settings related to the threshold level of the specified pod (port).	5-105
:LOGic:THReshold:{PODA PODB PODC PODD}:TYPE	Sets the type of threshold level of the specified pod (port) or queries the current setting.	5-105
:LOGic:THReshold:{PODA PODB PODC PODD}:USERlevel	Sets the threshold level of the specified pod (port) or queries the current setting.	5-105

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Commnd	Function	Page
MATH Group		
:MATH<x>?	Queries all settings related to the computation.	5-106
:MATH<x>:DA?	Queries all settings related to the D/A conversion.	5-106
:MATH<x>:DA:ARANGing	Executes the auto range of the D/A conversion.	5-106
:MATH<x>:DA:BFormat	Sets the binary format of D/A conversion or queries the current setting.	5-106
:MATH<x>:DA:HISTory:ABORt	Aborts the history computation of the D/A conversion.	5-106
:MATH<x>:DA:HISTory:EXECute	Executes the auto range of the D/A conversion.	5-106
:MATH<x>:DA:RESCaling?	Queries all settings related to the rescaling of the D/A conversion.	5-106
:MATH<x>:DA:RESCaling:AVALue	Sets rescaling coefficient A of the D/A conversion or queries the current setting.	5-106
:MATH<x>:DA:RESCaling:BVALue	Sets rescaling offset B of the D/A conversion or queries the current setting.	5-106
:MATH<x>:ECOut?	Queries all settings related to the edge count computation.	5-106
:MATH<x>:ECOut:HYSTeresis	Sets the hysteresis of the edge detection level of the edge count computation or queries the current setting.	5-106
:MATH<x>:ECOut:POLarity	Sets the edge detection polarity of the edge count computation or queries the current setting.	5-106
:MATH<x>:FILTer?	Queries all settings related to the filter.	5-106
:MATH<x>:FILTer:DELay?	Queries all settings related to the delay computation.	5-106
:MATH<x>:FILTer:DELay:TIME	Sets the delay value of the delay computation or queries the current setting.	5-107
:MATH<x>:FILTer:IIR?	Queries all settings related to the IIR filter computation.	5-107
:MATH<x>:FILTer:IIR:FORDer (Filter Order)	Sets the filter order of the IIR filter computation or queries the current setting.	5-107
:MATH<x>:FILTer:IIR:HIPass?	Queries all settings related to the IIR high pass filter computation.	5-107
:MATH<x>:FILTer:IIR:HIPass:COFF	Sets the cutoff frequency of the IIR high pass filter computation or queries the current setting.	5-107
:MATH<x>:FILTer:IIR:LOWPass?	Queries all settings related to the IIR low pass filter computation.	5-107
:MATH<x>:FILTer:IIR:LOWPass:COFF	Sets the cutoff frequency of the IIR low pass filter computation or queries the current setting.	5-107
:MATH<x>:FILTer:MAVG?	Queries all settings related to the moving average computation.	5-107
:MATH<x>:FILTer:MAVG:WEIGHT	Sets the weight of the moving average computation or queries the current setting.	5-107
:MATH<x>:FILTer:TYPE	Sets the filter type or queries the current setting.	5-107
:MATH<x>:IPoint? (Initial Point)	Queries all settings related to the computation reference point.	5-107
:MATH<x>:IPoint:JUMP	Moves the computation reference point to the specified position.	5-107
:MATH<x>:IPoint:POSition	Sets the computation reference point or queries the current setting.	5-108
:MATH<x>:LABel?	Queries all settings related to the label of the computed waveform.	5-108
:MATH<x>:LABel[:DEFine]	Sets the label of the computed waveform or queries the current setting.	5-108
:MATH<x>:LABel:MODE	Turns ON/OFF the label display of the computed waveform or queries the current setting.	5-108
:MATH<x>:OPERation	Sets the operator or queries the current setting.	5-108
:MATH<x>:SCALE?	Queries all settings related to scaling.	5-108
:MATH<x>:SCALE:CENTer	Sets the offset of the computed waveform or queries the current setting.	5-108
:MATH<x>:SCALE:MODE	Sets the scaling mode or queries the current setting.	5-108
:MATH<x>:SCALE:SENSitivity	Sets the vertical sensitivity of the computed waveform or queries the current setting.	5-109
:MATH<x>:SElect	Sets the display option or queries the current setting.	5-109
:MATH<x>:THReshold<x>	Sets the edge detection level of the count computation or queries the current setting.	5-109
:MATH<x>:UNIT?	Queries all settings related to the computation unit.	5-109
:MATH<x>:UNIT[:DEFine]	Sets the computation unit or queries the current setting.	5-109
:MATH<x>:UNIT:MODE	Sets the automatic/manual addition of the computation unit or queries the current setting.	5-109
:MATH<x>:USERdefine?	Queries all settings related to user-defined math or queries the current setting.	5-109
:MATH<x>:USERdefine:ARANGing	Executes auto ranging for user-defined math.	5-109
:MATH<x>:USERdefine:AVERAge?	Queries all averaging settings for user-defined computation.	5-109
:MATH<x>:USERdefine:AVERAge:EWEight	Sets or queries the attenuation constant of exponential averaging in user-defined computation.	5-109
:MATH<x>:USERdefine:AVERAge:MODE		
:MATH<x>:USERdefine:CONStant<x>	Sets a user-defined math constant or queries the current setting.	5-110

Command	Function	Page
:MATH<x>:USERdefine:DEFine	Sets a user-defined math equation or queries the current setting.	5-110
:MATH<x>:USERdefine:FILTer<y>?	Queries all filter settings for user-defined computation.	5-110
:MATH<x>:USERdefine:FILTer<y>: BAND	Sets or queries the filter band (frequency band) for user-defined computation.	5-110
:MATH<x>:USERdefine:FILTer<y>: CUTOff<z>	Sets or queries the cutoff frequency for user-defined computation.	5-110
:MATH<x>:USERdefine:FILTer<y>: TYPE	Sets or queries the filter type for user-defined computation.	5-110
:MATH<x>:USERdefine:HISTory: ABORt	Cancels history computation for user-defined math.	5-110
:MATH<x>:USERdefine:HISTory: EXECute	Executes history computation for user-defined math.	5-110

MEASure Group

:MEASure?	Queries all settings related to the automated measurement of waveform parameters.	5-111
:MEASure:BIT<x>?	Queries all settings related to each logic bit.	5-111
:MEASure:BIT<x>:AREA<x>?	Queries all settings related to each area.	5-111
:MEASure:BIT<x>:AREA<x>:ALL	Turns ON/OFF all logic waveform parameters.	5-111
:MEASure:BIT<x>: AREA<x>:<parameter>?	Queries all settings related to logic waveform parameters.	5-111
:MEASure:BIT<x>: AREA<x>:<parameter>:COUNT?	Queries the count for continuous statistical processing of logic waveform parameters.	5-111
:MEASure:BIT<x>:AREA<x>:<parameter>:{MAXimum MEAN MINimum SDEViation}?	Queries each statistical value of logic waveform parameters.	5-111
:MEASure:BIT<x>: AREA<x>:<parameter>:STATe	Turns ON/OFF the logic waveform parameters or queries the current setting.	5-111
:MEASure:BIT<x>: AREA<x>:<parameter>:VALue?	Queries automatically measured values of logic waveform parameters.	5-112
:MEASure:BIT<x>:AREA<x>:DElay: MEASure?	Queries all settings related to the measurement conditions for the source waveform of delay measurement between channels.	5-112
:MEASure:BIT<x>:AREA<x>:DElay: MEASure:COUNT	Sets the edge detection count for the source waveform of delay measurement between channels or queries the current setting.	5-112
:MEASure:BIT<x>:AREA<x>:DElay: MEASure:POLarity	Sets the polarity of the source waveform of delay measurement between channels or queries the current setting.	5-112
:MEASure:BIT<x>:AREA<x>:DElay: REFerence?	Queries all settings related to the reference waveform of delay measurement between channels.	5-112
:MEASure:BIT<x>:AREA<x>:DElay: REFerence:COUNT	Sets the edge detection count for the reference waveform of delay measurement between channels or queries the current setting.	5-112
:MEASure:BIT<x>:AREA<x>:DElay: REFerence:POLarity	Sets the polarity of the reference waveform of delay measurement between channels or queries the current setting.	5-113
:MEASure:BIT<x>:AREA<x>:DElay: REFerence:TRACe	Sets the trace for the reference waveform of delay measurement between channels or queries the current setting.	5-113
:MEASure:BIT<x>:AREA<x>:DElay: SOURce	Sets the reference of delay measurement between channels or queries the current setting.	5-113
:MEASure:CALCulation?	Queries all settings related to calculation items.	5-113
:MEASure:CALCulation:ALL	Turns ON/OFF all calculation items.	5-113
:MEASure:CALCulation:COUNT<x>?	Queries the statistical processing count of the calculation item.	5-113
:MEASure:CALCulation:DEFine<x>	Sets the equation of the calculation item or queries the current setting.	5-113
:MEASure:CALCulation:{MAXimum<x> MEAN<x> MINimum<x> SDEViation<x>}?	Queries the statistical value of the calculation item.	5-113
:MEASure:CALCulation:STATe<x>	Turns ON/OFF the calculation item or queries the current setting.	5-113
:MEASure:CALCulation:VALue<x>?	Queries the automated measured value of the calculation item.	5-114
:MEASure:CONTInuous?	Queries all settings related to the continuous statistical processing.	5-114
:MEASure:CONTInuous:COUNT	Sets the continuous statistical processing count or queries the current setting.	5-114

5.1 List of Commands

Commnd	Function	Page
:MEASure:CONTinuous:REStArt	Restarts the continuous statistical processing.	5-114
:MEASure:CYCLe?	Queries all settings related to the cycle statistical processing.	5-114
:MEASure:CYCLe:ABORt	Aborts the execution of the cycle statistical processing.	5-114
:MEASure:CYCLe:EXECute	Executes the cycle statistical processing. This is an overlap command.	5-114
:MEASure:CYCLe:TRACe	Sets the cycle source trace of the continuous statistical processing count or queries the current setting.	5-114
:MEASure:DISPlay	Turns ON/OFF the display of the automated measurement of waveform parameters or queries the current setting.	5-114
:MEASure:HISTory:ABORt	Aborts the execution of the statistical processing of the history data.	5-114
:MEASure:HISTory:EXECute	Executes the statistical processing of the history data. This is an overlap command.	5-114
:MEASure:MODE	Sets the mode of the automated measurement of waveform parameters or queries the current setting.	5-114
:MEASure:THReshold?	Queries all settings related to the threshold levels of the automated measurement of waveform parameters.	5-115
:MEASure:THReshold:TRACe<x>?	Queries the threshold levels of the trace.	5-115
:MEASure:THReshold:TRACe<x>:AUTO	Sets the detection mode when the auto setting of the threshold level is enabled or queries the current setting.	5-115
:MEASure:THReshold:TRACe<x>:LHYSteresis?	Queries all settings related to the level and hysteresis of the threshold level.	5-115
:MEASure:THReshold:TRACe<x>:LHYSteresis:HYSTeresis	Sets the hysteresis of the threshold level or queries the current setting.	5-115
:MEASure:THReshold:TRACe<x>:LHYSteresis:LEVel	Sets the level of the threshold level or queries the current setting.	5-115
:MEASure:THReshold:TRACe<x>:MODE	Sets the setup mode of the threshold level or queries the current setting.	5-115
:MEASure:THReshold:TRACe<x>:ULOWer?	Queries all settings related to the upper and lower limits of the threshold level.	5-116
:MEASure:THReshold:TRACe<x>:ULOWer:RANGe	Sets the upper and lower limits of the threshold level or queries the current setting.	5-116
:MEASure:TRACe<x>?	Queries all settings related to the trace.	5-116
:MEASure:TRACe<x>:AREa<x>?	Queries all settings related to the area.	5-116
:MEASure:TRACe<x>:AREa<x>:ALL	Turns ON/OFF all waveform parameters.	5-116
:MEASure:TRACe<x>:AREa<x>:<Parameter>?	Queries all settings related to the waveform parameter.	5-116
:MEASure:TRACe<x>:AREa<x>:<Parameter>:COUNT?	Queries the continuous statistical processing count of the waveform parameter.	5-116
:MEASure:TRACe<x>:AREa<x>:<Parameter>:{MAXimum MEAN MINimum SD EViation}?	Queries the statistical value of the waveform parameter.	5-116
:MEASure:TRACe<x>:AREa<x>:<Parameter>:STATe	Turns ON/OFF the waveform parameter or queries the current setting.	5-117
:MEASure:TRACe<x>:AREa<x>:<Parameter>:VALue?	Queries the automated measured value of the waveform parameter.	5-117
:MEASure:TRACe<x>:AREa<x>:DELay:MEASure?	Queries all settings related to the measurement conditions of the source waveform of the delay measurement between channels.	5-117
:MEASure:TRACe<x>:AREa<x>:DELay:MEASure:COUNT	Sets the edge detection count of the source waveform of the delay measurement between channels or queries the current setting.	5-117
:MEASure:TRACe<x>:AREa<x>:DELay:MEASure:POLarity	Sets the polarity of the source waveform of the delay measurement between channels or queries the current setting.	5-117
:MEASure:TRACe<x>:AREa<x>:DELay:REFerence?	Queries all settings related to the reference waveform of the delay measurement between channels.	5-117
:MEASure:TRACe<x>:AREa<x>:DELay:REFerence:COUNT	Sets the edge detection count of the reference waveform of the delay measurement between channels or queries the current setting.	5-118
:MEASure:TRACe<x>:AREa<x>:DELay:REFerence:POLarity	Sets the polarity of the reference waveform of the delay measurement between channels or queries the current setting.	5-118
:MEASure:TRACe<x>:AREa<x>:DELay:REFerence:TRACe	Sets the trace of the reference waveform of the delay measurement between channels or queries the current setting.	5-118
:MEASure:TRACe<x>:AREa<x>:DELay:SOURce	Sets the reference of the delay measurement between channels or queries the current setting.	5-118
:MEASure:TRACe<x>:DPRoximal?	Queries all settings related to the distal and proximal values.	5-118
:MEASure:TRACe<x>:DPRoximal:MODE	Sets the unit of the distal and proximal values or queries the current setting.	5-118
:MEASure:TRACe<x>:DPRoximal:PERCent	Sets the distal and proximal values as a percentage or queries the current setting.	5-119

5.1 List of Commands

Command	Function	Page
:MEASure:TRACe<x>:DPROximal:UNIT	Sets the distal and proximal values in the specified unit or queries the current setting.	5-119
:MEASure:TRACe<x>:METHod	Sets the method for detecting the High/Low level for automated measurement of waveform parameters or queries the current setting.	5-119
:MEASure:TRANge<x> (Time Range)	Sets the measurement range or queries the current setting.	5-119
:MEASure:WAIT?	Waits for the completion of the automated measurement with a timeout option.	5-119
:MEASure:WINDow<x>	Sets the measurement source window of the area or queries the current setting.	5-119

REFerence Group

:REFerence<x>?	Queries all settings related to the reference.	5-120
:REFerence<x>:LABel?	Queries all settings related to the waveform label of the reference.	5-120
:REFerence<x>:LABel[:DEFine]	Sets the waveform label of the reference or queries the current setting.	5-120
:REFerence<x>:LABel:MODE	Turns ON/OFF the waveform label display of the reference or queries the current setting.	5-120
:REFerence<x>:LOAD	Loads the waveform to the reference.	5-120
:REFerence<x>:POSition	Sets the vertical position of the reference or queries the current setting.	5-120
:REFerence<x>:SElect	Sets the waveform (computation or reference) to the computation channel or queries the current setting.	5-120

SEARCh Group

:SEARCh<x>?	Queries all settings related to the search function.	5-121
:SEARCh<x>:ABORT	Aborts the search.	5-121
:SEARCh<x>:CLOCK?	Queries all settings related to the clock channel.	5-121
:SEARCh<x>:CLOCK:POLarity	Sets the polarity of the clock channel or queries the current setting.	5-121
:SEARCh<x>:CLOCK:SOURce	Sets the clock trace of the search or queries the current setting.	5-121
:SEARCh<x>:DECimation	Sets the decimation detection of the skip mode or queries the current setting.	5-121
:SEARCh<x>:EXECute	Executes the search. This is an overlap command.	5-122
:SEARCh<x>:HOLDoff	Sets the hold off detection or queries the current setting.	5-122
:SEARCh<x>:LOGic	Sets the search logic or queries the current setting.	5-122
:SEARCh<x>:MARK	Turns ON/OFF the search mark or queries the current setting.	5-122
:SEARCh<x>:POLarity	Sets the search polarity or queries the current setting.	5-122
:SEARCh<x>:SElect	Sets the detection waveform number of the search function and queries the position that corresponds to the detection waveform number.	5-122
:SEARCh<x>:SElect? MAXimum	Queries the detection count of the search function.	5-122
:SEARCh<x>:SLOGic?	Queries all settings related to the logic search.	5-122
:SEARCh<x>:SLOGic:CLOCK?	Queries all settings related to the logic search clock.	5-122
:SEARCh<x>:SLOGic:CLOCK:POLarity	Sets the polarity of the clock of the logic search or queries the current setting.	5-123
:SEARCh<x>:SLOGic:CLOCK:SOURce	Sets the clock for the logic search or queries the current setting.	5-123
:SEARCh<x>:SLOGic:POLarity	Sets the logic search polarity or queries the current setting.	5-123
:SEARCh<x>:SLOGic:SOURce	Sets the logic search source or queries the current setting.	5-123
:SEARCh<x>:SLOGic:SPATtern? (Serial Pattern)	Queries all settings related to logic serial pattern search.	5-123
:SEARCh<x>:SLOGic:SPATtern:CLOCK?	Queries all settings related to the clock for the logic serial pattern search.	5-123
:SEARCh<x>:SLOGic:SPATtern:CLOCK:MODE	Enables/disables the clock for the logic serial analysis pattern search or queries the current setting.	5-123
:SEARCh<x>:SLOGic:SPATtern:CLOCK:POLarity	Sets the polarity of the clock trace of the logic serial pattern search or queries the current setting.	5-123
:SEARCh<x>:SLOGic:SPATtern:CLOCK:SOURce	Sets the clock trace for the logic serial pattern search or queries the current setting.	5-124
:SEARCh<x>:SLOGic:SPATtern:CS	Enables/disables the chip select for the logic serial analysis pattern search or queries the current setting.	5-124
:SEARCh<x>:SLOGic:SPATtern:LATCh?	Queries all settings related to the latch for the logic serial pattern search.	5-124
:SEARCh<x>:SLOGic:SPATtern:LATCh:POLarity	Sets the polarity of the latch trace of the logic serial pattern search or queries the current setting.	5-124

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Commnd	Function	Page
:SEARCh<x>:SLOGic:SPATtern:LATCh:TRACe	Sets the latch trace for the logic serial pattern search or queries the current setting.	5-124
:SEARCh<x>:SLOGic:SPATtern[:SETup]?	Queries all settings related to the setup for the logic serial pattern search.	5-124
:SEARCh<x>:SLOGic:SPATtern[:SETup]:BITRate	Sets the bit rate for the logic serial pattern search or queries the current setting.	5-125
:SEARCh<x>:SLOGic:SPATtern[:SETup]:CLEAr	Clears (Don't care) all patterns of the logic serial pattern search.	5-125
:SEARCh<x>:SLOGic:SPATtern[:SETup]:DATA?	Queries all settings related to the data for the logic serial pattern search.	5-125
:SEARCh<x>:SLOGic:SPATtern[:SETup]:DATA:ACTive	Sets the active trace level of the data for the logic serial pattern search or queries the current setting.	5-125
:SEARCh<x>:SLOGic:SPATtern[:SETup]:DATA:TRACe	Sets the trace of the data for the logic serial pattern search or queries the current setting.	5-125
:SEARCh<x>:SLOGic:SPATtern[:SETup]:HEXA	Sets the pattern of the logic serial pattern search in hexadecimal notation.	5-125
:SEARCh<x>:SLOGic:SPATtern[:SETup]:PATtern	Sets the pattern of the logic serial pattern search in binary notation, or queries the current setting.	5-125
:SEARCh<x>:SLOGic:STATe?	Queries all settings related to the logic state search.	5-125
:SEARCh<x>:SLOGic:STATe:BIT?	Queries all settings related to the bits of the logic state search.	5-126
:SEARCh<x>:SLOGic:STATe:BIT:{A<x> B<x> C<x> D<x>}	Sets the truth conditions for each bit of the logic state search or queries the current setting.	5-126
:SEARCh<x>:SLOGic:STATe:BIT:CLEAr	Clears (Don't care) all truth conditions for each bit of the logic serial pattern search.	5-126
:SEARCh<x>:SLOGic:STATe:BIT:LOGic	Sets the logic of the logic state search or queries the current setting.	5-126
:SEARCh<x>:SLOGic:STATe:GROup<x>?	Queries all settings related to each group of the logic state search.	5-126
:SEARCh<x>:SLOGic:STATe:GROup<x>:CLEAr	Clears (Don't care) all truth conditions for each group of the logic serial pattern search.	5-126
:SEARCh<x>:SLOGic:STATe:GROup<x>:CONDition	Sets the determination condition for each group of the logic state search or queries the current setting.	5-126
:SEARCh<x>:SLOGic:STATe:GROup<x>:DATA<x>	Sets the comparison data for each group of the logic state search or queries the current setting.	5-126
:SEARCh<x>:SLOGic:STATe:GROup<x>:HEXA	Sets the truth conditions for each group of the logic serial pattern search in hexadecimal notation.	5-127
:SEARCh<x>:SLOGic:STATe:GROup<x>:PATtern	Sets the truth condition for each group of the logic state search in binary notation or queries the current setting.	5-127
:SEARCh<x>:SLOGic:STATe:GROup<x>:SYMBol	Sets the symbol item for each group of the logic state search.	5-127
:SEARCh<x>:SLOGic:STATe:TYPE	Sets the setting method of the logic state search or queries the current setting.	5-127
:SEARCh<x>:SLOGic:WIDTh?	Queries all settings of the logic pulse width search.	5-127
:SEARCh<x>:SLOGic:WIDTh:MODE	Sets the determination mode of the logic pulse width search or queries the current setting.	5-127
:SEARCh<x>:SLOGic:WIDTh:TIME<x>	Sets the pulse width of the logic pulse width search or queries the current setting.	5-127
:SEARCh<x>:SLOGic:WIDTh:TYPE	Sets the logic pulse width search type or queries the current setting.	5-128
:SEARCh<x>:SMODE	Sets the skip mode or queries the current setting.	5-128
:SEARCh<x>:SPATtern? (Serial Pattern)	Queries all settings related to the serial pattern search.	5-128
:SEARCh<x>:SPATtern:CLOCK?	Queries all settings related to clock of the serial pattern search.	5-128
:SEARCh<x>:SPATtern:CLOCK:MODE	Enables/Disables the clock of the serial pattern search or queries the current setting.	5-128
:SEARCh<x>:SPATtern:CLOCK:POLarity	Sets the polarity of the clock trace of the serial pattern search or queries the current setting.	5-128
:SEARCh<x>:SPATtern:CLOCK:SOURce	Sets the clock trace of the serial pattern search or queries the current setting.	5-128
:SEARCh<x>:SPATtern:CS	Enables/Disables the chip select of the serial pattern search or queries the current setting.	5-128
:SEARCh<x>:SPATtern:LATCh?	Queries all settings related to latch of the serial pattern search.	5-128
:SEARCh<x>:SPATtern:LATCh:POLarity	Sets the polarity of the latch trace of the serial pattern search or queries the current setting.	5-128
:SEARCh<x>:SPATtern:LATCh:TRACe	Sets the latch trace of the serial pattern search or queries the current setting.	5-129

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Commnd	Function	Page
:SEARCh<x>:SPATtern:SETup?	Queries all settings related to setup of the serial pattern search.	5-129
:SEARCh<x>:SPATtern[:SETup]:BITRate	Sets the bit rate of the serial pattern search or queries the current setting.	5-129
:SEARCh<x>:SPATtern[:SETup]:CLEAr	Clears the entire pattern of the serial pattern search (to don't care).	5-129
:SEARCh<x>:SPATtern[:SETup]:DATA?	Queries all settings related to data of the serial pattern search.	5-129
:SEARCh<x>:SPATtern[:SETup]:DATA:ACTive	Sets the active level of the data trace of the serial pattern search or queries the current setting.	5-129
:SEARCh<x>:SPATtern[:SETup]:DATA:TRACe	Sets the data trace of the serial pattern search or queries the current setting.	5-129
:SEARCh<x>:SPATtern[:SETup]:HEXA	Sets the pattern of the serial pattern search in hexadecimal notation.	5-129
:SEARCh<x>:SPATtern[:SETup]:PATtern	Sets the pattern of the serial pattern search in binary notation or queries the current setting.	5-129
:SEARCh<x>:SPOint	Sets the search start position or queries the current setting.	5-130
:SEARCh<x>:STRace	Sets the search source trace or queries the current setting.	5-130
:SEARCh<x>:TRACe<x>?	Queries all settings related to the search conditions of the trace.	5-130
:SEARCh<x>:TRACe<x>:CONDition	Sets the condition to be satisfied for the trace or queries the current setting.	5-130
:SEARCh<x>:TRACe<x>:HYSTeresis	Sets the hysteresis of the trace or queries the current setting.	5-130
:SEARCh<x>:TRACe<x>:LEVel	Sets the threshold level of the trace or queries the current setting.	5-130
:SEARCh<x>:TYPE	Sets the search type or queries the current setting.	5-130
:SEARCh<x>:WIDTh?	Queries all settings related to the pulse width search.	5-130
:SEARCh<x>:WIDTh:MODE	Sets the pulse width determination mode or queries the current setting.	5-130
:SEARCh<x>:WIDTh:TIME<x>	Sets the pulse width of the pulse width search or queries the current setting.	5-131
:SEARCh<x>:WIDTh:TYPE	Sets the pulse width search type or queries the current setting.	5-131

SNAP Group

:SNAP	Executes the snapshot.	5-132
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SSTart Group

:SSTart?	Starts the waveform acquisition with the trigger mode set to single. If the waveform acquisition stops within the specified time period, 0 is returned at that point.	5-133
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START Group

:START	Starts the waveform acquisition.	5-134
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STATus Group

:STATus?	Queries all settings related to the communication status function.	5-135
:STATus:CONDition?	Queries the contents of the condition register.	5-135
:STATus:EESE	Sets the extended event enable register or queries the current setting.	5-135
:STATus:EESR?	Queries the content of the extended event register and clears the register.	5-135
:STATus:ERRor?	Queries the error code and message information (top of the error queue).	5-135
:STATus:FILTer<x>	Sets the transition filter or queries the current setting.	5-135
:STATus:QENable	Sets whether to store messages other than errors to the error queue or queries the current setting.	5-135
:STATus:QMESsage	Sets whether or not to attach message information to the response to the "STATus:ERRor?" query or queries the current setting.	5-135
:STATus:SPOLL? (Serial Poll)	Executes serial polling.	5-135

5.1 List of Commands

Commnd	Function	Page
STOP Group		
:STOP	Stops the waveform acquisition.	5-136
SYSTem Group		
:SYSTem?	Queries all settings related to the system.	5-137
:SYSTem:CLICk	Turns ON/OFF the click sound or queries the current setting.	5-137
:SYSTem:CLOCk?	Queries all settings related to the date, time, and time difference with respect to GMT.	5-137
:SYSTem:CLOCk:DTIME	Sets the date, time, and time difference with respect to GMT or queries the current setting.	5-137
:SYSTem:CLOCk:MODE	Turns ON/OFF the date, time, and time difference with respect to GMT or queries the current setting.	5-137
:SYSTem:FORMat:IMEMory[:EXECute]	Formats the internal memory.	5-137
:SYSTem:FORMat:SDElete[:EXECute] (Sure Delete)	Clears and formats the internal memory.	5-137
:SYSTem:LANGuage	Sets the message language or queries the current setting.	5-137
:SYSTem:MFSize	Sets the menu font size or queries the current setting.	5-137
:SYSTem:MLANGuage	Sets the menu language or queries the current setting.	5-137
:SYSTem:OCANcel (Offset Cancel)	Sets or queries whether or not the specified offset voltage will be applied to measurement and computation (on/off).	5-137
:SYSTem:OVERview	Displays system information.	5-137
:SYSTem:USBKeyboard	Sets the USB keyboard type or queries the current setting.	5-138
TELecomtest (Mask) Group		
:TELecomtest?	Queries all settings related to the mask test.	5-139
:TELecomtest:CATegory	Sets the mask test type or queries the current setting.	5-139
:TELecomtest:DISPlay	Turns ON/OFF the mask test display or queries the current setting.	5-139
:TELecomtest:EYEPattern?	Queries all settings related to the eye pattern.	5-139
:TELecomtest:EYEPattern:ALL	Turns ON/OFF all eye pattern parameters.	5-139
:TELecomtest:EYEPattern:<Parameter>?	Queries all settings related to the waveform parameter of the eye pattern.	5-139
:TELecomtest:EYEPattern:<Parameter>:STATe	Turns ON/OFF the waveform parameter of the eye pattern or queries the current setting.	5-139
:TELecomtest:EYEPattern:<Parameter>:VALue?	Queries the waveform parameter value of the eye pattern.	5-139
:TELecomtest:EYEPattern:TLEVELs?	Queries all settings related to the threshold level of the eye pattern.	5-139
:TELecomtest:EYEPattern:TLEVELs:MODE	Sets the unit of the threshold level of the eye pattern or queries the current setting.	5-139
:TELecomtest:EYEPattern:TLEVELs:PERCent	Sets the threshold level of the eye pattern as a percentage or queries the current setting.	5-140
:TELecomtest:EYEPattern:TLEVELs:UNIT	Sets the threshold level of the eye pattern in UNIT or queries the current setting.	5-140
:TELecomtest:EYEPattern:VDARk	Sets the dark level (zero light level) or queries the current setting.	5-140
:TELecomtest:MASK?	Queries all settings related to the mask test.	5-140
:TELecomtest:MASK:ELEMent<x>?	Queries all settings related to the element used in the mask test.	5-140
:TELecomtest:MASK:ELEMent<x>:ALL	Turns ON/OFF all items of the element.	5-140
:TELecomtest:MASK:ELEMent<x>:PSPCount? (Sample Point Count %)	Queries the settings related to the error rate for the number of sampled data points of the element.	5-140
:TELecomtest:MASK:ELEMent<x>:PSPCount:STATe	Turns ON/OFF the measurement of the error rate for the number of sampled data points of the element or queries the current setting.	5-140
:TELecomtest:MASK:ELEMent<x>:PSPCount:VALue?	Queries the error rate for the number of sampled data points of the element.	5-140
:TELecomtest:MASK:ELEMent<x>:PWCount? (Wave Count %)	Queries the settings related to the error rate for the acquisition count of the element.	5-140
:TELecomtest:MASK:ELEMent<x>:PWCount:STATe	Turns ON/OFF the measurement of the error rate for the acquisition count of the element or queries the current setting.	5-141
:TELecomtest:MASK:ELEMent<x>:PWCount:VALue?	Queries the error rate for the acquisition count of the element.	5-141

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Commnd	Function	Page
:TELeomtest:MASK:ELEment<x>:SPCount? (Sample Point Count)	Queries the settings related to the number of sampled data points for the element that results in error.	5-141
:TELeomtest:MASK:ELEment<x>:SPCount:STATe	Turns ON/OFF the measurement of the number of sampled data points for the element that results in error or queries the current setting.	5-141
:TELeomtest:MASK:ELEment<x>:SPCount:VALue?	Queries the number of sampled data points for the element that resulted in error.	5-141
:TELeomtest:MASK:ELEment<x>:WCount? (Wave Count)	Queries the settings related to the acquisition count for the element that results in error.	5-141
:TELeomtest:MASK:ELEment<x>:WCount:STATe	Turns ON/OFF the measurement of the acquisition count for the element that results in error or queries the current setting.	5-141
:TELeomtest:MASK:ELEment<x>:WCount:VALue?	Queries the acquisition count for the element that resulted in error.	5-141
:TELeomtest:MMODE	Turns ON/OFF the computed waveform or queries the current setting.	5-142
:TELeomtest:TRACe	Sets the source trace of the mask test or queries the current setting.	5-142
:TELeomtest:TRANge (Time Range)	Sets the measurement range of the mask test or queries the current setting.	5-142
:TELeomtest:WINDow	Sets the measurement source window of the mask test or queries the current setting.	5-142

TImebase Group

:TImebase?	Queries all settings related to the time base.	5-143
:TImebase:SRATe? (Sample RATE)	Queries the sample rate or queries the current setting.	5-143
:TImebase:TDIV	Sets the T/div value or queries the current setting.	5-143

TRIGger Group

:TRIGger?	Queries all settings related to the trigger.	5-144
:TRIGger:ACTion?	Queries all settings related to action-on-trigger.	5-144
:TRIGger:ACTion:ACQCount	Sets the action count of action-on-trigger or queries the current setting.	5-144
:TRIGger:ACTion:BUZZer	Sets whether to sound a buzzer when an action is activated or queries the current setting.	5-144
:TRIGger:ACTion:HCOPy	Sets whether or not to output screen image data (ON/OFF) when an action is activated, or queries the current setting.	5-144
:TRIGger:ACTion:MAIL?	Queries all settings related to the mail transmission when an action is activated.	5-144
:TRIGger:ACTion:MAIL:INTerval	Sets the interval at which to send mail when an action is activated or queries the current setting.	5-144
:TRIGger:ACTion:MAIL:MODE	Sets whether to send mail when an action is activated or queries the current setting.	5-144
:TRIGger:ACTion:MODE	Sets the action-on-trigger mode or queries the current setting.	5-144
:TRIGger:ACTion:SAVE	Sets whether to save the waveform data to the storage medium (ON/OFF) when an action is activated or queries the current setting.	5-144
:TRIGger:ACTion:START	Starts the action-on-trigger.	5-144
:TRIGger:ACTion:STOP	Stops the action-on-trigger.	5-144
:TRIGger:BTRigger?	Queries all B trigger condition settings.	5-144
:TRIGger:BTRigger:COMBination	Sets or queries the trigger combination.	5-144
:TRIGger:BTRigger:COUNt	Sets or queries the number of times condition B must be met for the A->B(n) trigger.	5-145
:TRIGger:BTRigger:DELay	Sets or queries the delay time for condition B for the A Delay B trigger.	5-145
:TRIGger:BTRigger:EDGE		
:TRIGger:BTRigger:EDGE:SLOPe	Sets or queries the B edge trigger slope.	5-145
:TRIGger:BTRigger:EDGE:SOURce	Sets or queries the B edge trigger source.	5-145
:TRIGger:CLOCK?	Queries all settings related to the clock channel.	5-145
:TRIGger:CLOCK:POLarity	Sets the polarity of the clock channel or queries the current setting.	5-145
:TRIGger:CLOCK:SOURce	Sets the source waveform of the clock channel or queries the current setting.	5-145
:TRIGger:DELay?	Queries all settings related to the trigger delay.	5-145
:TRIGger:DELay[:TIME]	Sets the delay value the trigger delay or queries the current setting.	5-145
:TRIGger:EDGE?	Queries all edge trigger settings.	5-145
:TRIGger:EDGE:COUPling	Sets or queries the edge trigger source trigger coupling.	5-146
:TRIGger:EDGE:HFR rejection (HighFrequencyREJECTION)	Sets or queries the on/off status of the trigger source low-pass filter (HF rejection) for edge triggering.	5-146

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Commnd	Function	Page
:TRIGger:EDGE:HYSTeresis	Sets or queries the noise rejection setting for the edge trigger source trigger level.	5-146
:TRIGger:EDGE:LEVel	Sets or queries the edge trigger source trigger level.	5-146
:TRIGger:EDGE:PROBe	Sets or queries the external trigger source probe setting for edge triggering.	5-146
:TRIGger:EDGE:SLOPe	Sets or queries the trigger source trigger slope (the polarity when window is set to ON) for edge triggering.	5-146
:TRIGger:EDGE:SOURce	Sets or queries the edge trigger source.	5-146
:TRIGger:EDGE:WIDTh	Sets or queries the edge trigger source window width.	5-147
:TRIGger:EDGE:WINDow	Sets or queries the edge trigger source window.	5-147
:TRIGger:EINterval?	Queries all settings related to the event interval.	5-147
:TRIGger:EINterval:EVENT<x>?	Queries all settings related to the event.	5-147
:TRIGger:EINterval:EVENT<x>:CLOCK?	Queries all settings related to the clock channel of the event.	5-147
:TRIGger:EINterval:EVENT<x>:CLOCK:POLarity	Sets the polarity of the clock channel of the event or queries the current setting.	5-147
:TRIGger:EINterval:EVENT<x>:CLOCK:SOURce	Sets the source waveform of the clock channel of the event or queries the current setting.	5-148
:TRIGger:EINterval:EVENT<x>:ESTate?	Queries all settings related to the edge/state trigger.	5-148
:TRIGger:EINterval:EVENT<x>:ESTate:POLarity	Sets the polarity of the edge/state trigger or queries the current setting.	5-148
:TRIGger:EINterval:EVENT<x>:LOGic?	Queries all settings related to the logic trigger of the event.	5-148
:TRIGger:EINterval:EVENT<x>:LOGic:CLOCK?	Queries all settings related to the logic trigger clock.	5-148
:TRIGger:EINterval:EVENT<x>:LOGic:CLOCK:POLarity	Sets the polarity of the logic trigger clock or queries the current setting.	5-148
:TRIGger:EINterval:EVENT<x>:LOGic:CLOCK:SOURce	Sets the clock source of the logic trigger or queries the current setting.	5-148
:TRIGger:EINterval:EVENT<x>:LOGic:ESTate?	Queries all settings related to the edge/state trigger of the logic.	5-148
:TRIGger:EINterval:EVENT<x>:LOGic:ESTate:POLarity	Sets the polarity of the edge/state trigger of the logic or queries the current setting.	5-149
:TRIGger:EINterval:EVENT<x>:LOGic:ESTate:SOURce	Sets the edge/state trigger source of the logic or queries the current setting.	5-149
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern? (Serial Pattern)	Queries all settings related to the logic serial pattern trigger of each event.	5-149
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:BITRate	Sets the bit rate for the logic serial pattern trigger or queries the current setting.	5-149
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:CLEAr	Clears (set to don't care) all patterns of the logic serial pattern trigger.	5-149
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:CLOCK?	Queries all settings related to the clock for the logic serial pattern trigger.	5-149
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:CLOCK:MODE	Enables/disables the clock for the logic serial analysis pattern trigger or queries the current setting.	5-149
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:CLOCK:POLarity	Sets the polarity of the clock trace of the logic serial pattern trigger or queries the current setting.	5-150
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:CLOCK:SOURce	Sets the clock trace for the logic serial pattern trigger or queries the current setting.	5-150
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:CS	Enables/disables the chip select for the logic serial analysis pattern trigger or queries the current setting.	5-150
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:DATA?	Queries all settings related to the data for the logic serial pattern trigger.	5-150
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:DATA:ACTive	Sets the active level of the data for the logic serial pattern trigger or queries the current setting.	5-150
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:DATA:SOURce	Sets the data rate for the logic serial pattern trigger or queries the current setting.	5-151
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:HEXA	Sets the pattern of the logic serial pattern trigger in hexadecimal notation.	5-151
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:LATCh?	Queries all settings related to the latch for the logic serial pattern trigger.	5-151
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:LATCh:POLarity	Sets the polarity of the latch trace of the logic serial pattern trigger or queries the current setting.	5-151

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Command	Function	Page
:TRIGger:EINterval:EVENT<x>: LOGic:SPATtern:LATCh:SOURce	Sets the latch trace for the logic serial pattern trigger or queries the current setting.	5-151
:TRIGger:EINterval:EVENT<x>: LOGic:SPATtern:PATtern	Sets the pattern of the logic serial pattern trigger in binary notation, or queries the current setting.	5-152
:TRIGger:EINterval:EVENT<x>: LOGic:STATe?	Queries all settings related to the logic state trigger.	5-152
:TRIGger:EINterval:EVENT<x>: LOGic:STATe:BIT?	Queries all settings related to the bit of the logic state trigger.	5-152
:TRIGger:EINterval:EVENT<x>: LOGic:STATe:BIT:{A<y> B<y> C<y> D<y>}	Sets the condition to be satisfied for the bit of the logic state trigger or queries the current setting.	5-152
:TRIGger:EINterval:EVENT<x>: LOGic:STATe:BIT:CLEar	Clears the entire condition to be satisfied for the bit of the logic state trigger (set to don't care) or queries the current setting.	5-152
:TRIGger:EINterval:EVENT<x>: LOGic:STATe:BIT:LOGic	Sets the logic of the logic state trigger or queries the current setting.	5-152
:TRIGger:EINterval:EVENT<x>: LOGic:STATe:GROup<x>?	Queries all settings related to the group of the logic state trigger.	5-152
:TRIGger:EINterval:EVENT<x>: LOGic:STATe:GROup<x>:CLEar	Clears the entire condition to be satisfied for the group of the logic state trigger (set to don't care) or queries the current setting.	5-152
:TRIGger:EINterval:EVENT<x>: LOGic:STATe:GROup<x>:CONDition	Sets the determination condition for the group of the logic state trigger or queries the current setting.	5-153
:TRIGger:EINterval:EVENT<x>: LOGic:STATe:GROup<x>:HEXA	Sets the condition to be satisfied for the group of the logic state trigger in hexadecimal notation.	5-153
:TRIGger:EINterval:EVENT<x>: LOGic:STATe:GROup<x>:PATtern	Sets the condition to be satisfied for the group of the logic state trigger in binary notation or queries the current setting.	5-153
:TRIGger:EINterval:EVENT<x>: LOGic:STATe:GROup<x>:SYMBOL	Sets the symbol item for each group of the logic state trigger.	5-153
:TRIGger:EINterval:EVENT<x>: LOGic:STATe:TYPE	Sets the setup type of the logic state trigger or queries the current setting.	5-153
:TRIGger:EINterval:EVENT<x>: LOGic:WIDTh?	Queries all settings related to the logic pulse width trigger.	5-153
:TRIGger:EINterval:EVENT<x>: LOGic:WIDTh:MODE	Sets the determination mode of the logic pulse width trigger or queries the current setting.	5-153
:TRIGger:EINterval:EVENT<x>: LOGic:WIDTh:POLarity	Sets the polarity of the logic pulse width trigger or queries the current setting.	5-154
:TRIGger:EINterval:EVENT<x>: LOGic:WIDTh:SOURce	Sets the trigger source of the logic pulse width trigger or queries the current setting.	5-154
:TRIGger:EINterval:EVENT<x>: LOGic:WIDTh:TIME<x>	Sets the logic pulse width of the pulse width trigger or queries the current setting.	5-154
:TRIGger:EINterval:EVENT<x>: SPATtern? (Serial Pattern)	Queries all settings related to the serial pattern trigger of the event.	5-154
:TRIGger:EINterval:EVENT<x>: SPATtern:BITRate	Sets the bit rate of the serial pattern trigger or queries the current setting.	5-154
:TRIGger:EINterval:EVENT<x>: SPATtern:CLEar	Clears the entire pattern of the serial pattern trigger (to don't care).	5-154
:TRIGger:EINterval:EVENT<x>: SPATtern:CLOCK?	Queries all settings related to clock of the serial pattern trigger.	5-154
:TRIGger:EINterval:EVENT<x>: SPATtern:CLOCK:MODE	Enables/Disables the clock of the serial pattern trigger or queries the current setting.	5-155
:TRIGger:EINterval:EVENT<x>: SPATtern:CLOCK:POLarity	Sets the polarity of the clock trace of the serial pattern trigger or queries the current setting.	5-155
:TRIGger:EINterval:EVENT<x>: SPATtern:CLOCK:SOURce	Sets the clock trace of the serial pattern trigger or queries the current setting.	5-155
:TRIGger:EINterval:EVENT<x>: SPATtern:CS	Enables/Disables the chip select of the serial pattern trigger or queries the current setting.	5-155
:TRIGger:EINterval:EVENT<x>: SPATtern:DATA?	Queries all settings related to data of the serial pattern trigger.	5-155
:TRIGger:EINterval:EVENT<x>: SPATtern:DATA:ACTive	Sets the active level of the data of the serial pattern trigger or queries the current setting.	5-155
:TRIGger:EINterval:EVENT<x>: SPATtern:DATA:SOURce	Sets the data trace of the serial pattern trigger or queries the current setting.	5-155

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Commnd	Function	Page
:TRIGger:EINterval:EVENT<x>:SPATtern:HEXA	Sets the pattern of the serial pattern trigger in hexadecimal notation.	5-156
:TRIGger:EINterval:EVENT<x>:SPATtern:LATCh?	Queries all settings related to latch of the serial pattern trigger.	5-156
:TRIGger:EINterval:EVENT<x>:SPATtern:LATCh:POLarity	Sets the polarity of the latch trace of the serial pattern trigger or queries the current setting.	5-156
:TRIGger:EINterval:EVENT<x>:SPATtern:LATCh:SOURce	Sets the latch trace of the serial pattern trigger or queries the current setting.	5-156
:TRIGger:EINterval:EVENT<x>:SPATtern:PATtern	Sets the pattern of the serial pattern trigger in binary notation or queries the current setting.	5-156
:TRIGger:EINterval:EVENT<x>:STATe?	Queries all settings related to condition to be satisfied of the event.	5-156
:TRIGger:EINterval:EVENT<x>:STATe:CHANnel<x>	Sets the condition to be satisfied of the channel or queries the current setting.	5-157
:TRIGger:EINterval:EVENT<x>:STATe:LOGic	Sets the logic of the condition to be satisfied or queries the current setting.	5-157
:TRIGger:EINterval:EVENT<x>:TYPE	Sets the trigger type of the event or queries the current setting.	5-157
:TRIGger:EINterval:EVENT<x>:WIDTh?	Queries all settings related to the pulse width trigger of the event.	5-157
:TRIGger:EINterval:EVENT<x>:WIDTh:MODE	Sets the determination mode of the pulse width trigger or queries the current setting.	5-157
:TRIGger:EINterval:EVENT<x>:WIDTh:POLarity	Sets the polarity of the pulse width trigger or queries the current setting.	5-158
:TRIGger:EINterval:EVENT<x>:WIDTh:SOURce	Sets the trigger source of the pulse width trigger or queries the current setting.	5-158
:TRIGger:EINterval:EVENT<x>:WIDTh:TIME<x>	Sets the pulse width of the pulse width trigger or queries the current setting.	5-158
:TRIGger:EINterval:MODE	Sets the determination mode of the event interval or queries the current setting.	5-158
:TRIGger:EINterval:TIME<x>	Sets the interval time of the event interval or queries the current setting.	5-158
:TRIGger:EINterval:TRY?	Queries all settings related to the event interval trial.	5-158
:TRIGger:EINterval:TRY:MODE	Sets the trial mode or queries the current setting.	5-159
:TRIGger:EINterval:TRY:SElect	Sets the source event of the trial mode or queries the current setting.	5-159
:TRIGger:ENHanced?	Queries all settings related to the enhanced trigger.	5-159
:TRIGger:ENHanced:SPATtern? (Serial Pattern)	Queries all settings related to the serial pattern trigger.	5-159
:TRIGger:ENHanced:SPATtern:BITRate	Sets the bit rate of the serial pattern trigger or queries the current setting.	5-159
:TRIGger:ENHanced:SPATtern:CLEAr	Clears the entire pattern of the serial pattern trigger (to don't care).	5-159
:TRIGger:ENHanced:SPATtern:CLOCK?	Queries all settings related to clock of the serial pattern trigger.	5-159
:TRIGger:ENHanced:SPATtern:CLOCK:MODE	Enables/Disables the clock of the serial pattern trigger or queries the current setting.	5-159
:TRIGger:ENHanced:SPATtern:CLOCK:POLarity	Sets the polarity of the clock trace of the serial pattern trigger or queries the current setting.	5-159
:TRIGger:ENHanced:SPATtern:CLOCK:SOURce	Sets the clock trace of the serial pattern trigger or queries the current setting.	5-159
:TRIGger:ENHanced:SPATtern:CS	Enables/Disables the chip select of the serial pattern trigger or queries the current setting.	5-159
:TRIGger:ENHanced:SPATtern:DATA?	Queries all settings related to data of the serial pattern trigger.	5-160
:TRIGger:ENHanced:SPATtern:DATA:ACTive	Sets the active level of the data of the serial pattern trigger or queries the current setting.	5-160
:TRIGger:ENHanced:SPATtern:DATA:SOURce	Sets the data trace of the serial pattern trigger or queries the current setting.	5-160
:TRIGger:ENHanced:SPATtern:HEXA	Sets the pattern of the serial pattern trigger in hexadecimal notation.	5-160
:TRIGger:ENHanced:SPATtern:LATCh?	Queries all settings related to latch of the serial pattern trigger.	5-160
:TRIGger:ENHanced:SPATtern:LATCh:POLarity	Sets the polarity of the latch trace of the serial pattern trigger or queries the current setting.	5-160

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Command	Function	Page
:TRIGger:ENHanced:SPATtern:LATCh:SOURce	Sets the latch trace of the serial pattern trigger or queries the current setting.	5-160
:TRIGger:ENHanced:SPATtern:PATtern	Sets the pattern of the serial pattern trigger in binary notation or queries the current setting.	5-160
:TRIGger:ENHanced:TV?	Queries all settings related to the TV trigger.	5-160
:TRIGger:ENHanced:TV:COUPling?	Queries the trigger coupling of the TV trigger.	5-161
:TRIGger:ENHanced:TV:CUSTomize	Turns ON/OFF the sync guard function of the TV trigger or queries the current setting.	5-161
:TRIGger:ENHanced:TV:FIELD	Sets the field of the TV trigger or queries the current setting.	5-161
:TRIGger:ENHanced:TV:FRAME	Sets the frame skip function of the TV trigger or queries the current setting.	5-161
:TRIGger:ENHanced:TV:{HDTV NTSC PAL SDTV USERdefine}?	Queries all settings related to the TV trigger mode.	5-161
:TRIGger:ENHanced:TV:{HDTV NTSC PAL SDTV}:HFRejection?(HighFrequencyREJECTION)	Queries the low pass filter (HF rejection) of the TV trigger.	5-161
:TRIGger:ENHanced:TV:{HDTV NTSC PAL SDTV USERdefine}:LINE	Sets the line for activating the TV trigger or queries the current setting.	5-161
:TRIGger:ENHanced:TV:{HDTV NTSC PAL SDTV USERdefine}:POLarity	Sets the input polarity of the TV trigger or queries the current setting.	5-161
:TRIGger:ENHanced:TV:LEVel	Sets the trigger level of the TV trigger or queries the current setting.	5-161
:TRIGger:ENHanced:TV:SGUard	Sets the sync guard of the TV trigger or queries the current setting.	5-162
:TRIGger:ENHanced:TV:SOURce	Sets the trigger source of the TV trigger or queries the current setting.	5-162
:TRIGger:ENHanced:TV:TYPE	Sets the input type of the TV trigger or queries the current setting.	5-162
:TRIGger:ENHanced:TV:USERdefine:DEFinition	Sets the user-defined resolution or queries the current setting.	5-162
:TRIGger:ENHanced:TV:USERdefine:HFRejection(HighFrequencyREJECTION)	Sets the user-defined low pass filter (HF rejection) or queries the current setting.	5-162
:TRIGger:ENHanced:TV:USERdefine:HSYnc (Hsync Freq)	Sets the user-defined horizontal sync signal or queries the current setting.	5-162
:TRIGger:ESTate?	Queries all settings related to the edge/state trigger.	5-162
:TRIGger:ESTate:EOR?	Queries all settings related to the OR trigger.	5-162
:TRIGger:ESTate:EOR:CHANnel<x>	Sets the channel polarity of the OR trigger or queries the current setting.	5-162
:TRIGger:ESTate:POLarity	Sets the polarity of the edge/state trigger or queries the current setting.	5-163
:TRIGger:ESTate:SOURce	Sets the trigger source of the edge/state trigger or queries the current setting.	5-163
:TRIGger:HOLDoff	Sets the hold off time or queries the current setting.	5-163
:TRIGger:LOGic?	Queries all settings related to the logic trigger.	5-163
:TRIGger:LOGic:CLOCK?	Queries all settings related to the logic trigger clock.	5-163
:TRIGger:LOGic:CLOCK:POLarity	Sets the polarity of the logic trigger clock or queries the current setting.	5-163
:TRIGger:LOGic:CLOCK:SOURce	Sets the clock source of the logic trigger or queries the current setting.	5-163
:TRIGger:LOGic:ESTate?	Queries all settings related to the edge qualify/state trigger of the logic.	5-163
:TRIGger:LOGic:ESTate:POLarity	Sets the polarity of the edge qualify/state trigger of the logic or queries the current setting.	5-163
:TRIGger:LOGic:ESTate:SOURce	Sets the edge qualify/state trigger source of the logic or queries the current setting.	5-163
:TRIGger:LOGic:SPATtern? (Serial Pattern)	Queries all settings related to logic serial pattern trigger.	5-164
:TRIGger:LOGic:SPATtern:BITRate	Sets the bit rate for the logic serial pattern trigger or queries the current setting.	5-164
:TRIGger:LOGic:SPATtern:CLEar	Clears (set to don't care) all patterns of the logic serial pattern trigger.	5-164
:TRIGger:LOGic:SPATtern:CLOCK?	Queries all settings related to the clock for the logic serial pattern trigger.	5-164
:TRIGger:LOGic:SPATtern:CLOCK:MODE	Enables/disables the clock for the logic serial analysis pattern trigger or queries the current setting.	5-164

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Commnd	Function	Page
:TRIGger:LOGic:SPATtern:CLOCK:POLarity	Sets the polarity of the clock trace of the logic serial pattern trigger or queries the current setting.	5-164
:TRIGger:LOGic:SPATtern:CLOCK:SOURce	Sets the clock trace for the logic serial pattern trigger or queries the current setting.	5-164
:TRIGger:LOGic:SPATtern:CS	Enables/disables the chip select for the logic serial analysis pattern trigger or queries the current setting.	5-164
:TRIGger:LOGic:SPATtern:DATA?	Queries all settings related to the data for the logic serial pattern trigger.	5-164
:TRIGger:LOGic:SPATtern:DATA:ACTIVE	Sets the active level of the data for the logic serial pattern trigger or queries the current setting.	5-164
:TRIGger:LOGic:SPATtern:DATA:SOURce	Sets the data rate for the logic serial pattern trigger or queries the current setting.	5-164
:TRIGger:LOGic:SPATtern:HEXA	Sets the pattern of the logic serial pattern trigger in hexadecimal notation.	5-165
:TRIGger:LOGic:SPATtern:LATCh?	Queries all settings related to the latch for the logic serial pattern trigger.	5-165
:TRIGger:LOGic:SPATtern:LATCh:POLarity	Sets the polarity of the latch trace of the logic serial pattern trigger or queries the current setting.	5-165
:TRIGger:LOGic:SPATtern:LATCh:SOURce	Sets the latch trace for the logic serial pattern trigger or queries the current setting.	5-165
:TRIGger:LOGic:SPATtern:PATtern	Sets the pattern of the logic serial pattern trigger in binary notation, or queries the current setting.	5-165
:TRIGger:LOGic:STATE?	Queries all settings related to the logic state trigger.	5-165
:TRIGger:LOGic:STATE:BIT?	Queries all settings related to the bit of the logic state trigger.	5-165
:TRIGger:LOGic:STATE:BIT:{A<x> B<x> C<x> D<x>}	Sets the condition to be satisfied for the bit of the logic state trigger or queries the current setting.	5-165
:TRIGger:LOGic:STATE:BIT:CLEAr	Clears the entire condition to be satisfied for the bit of the logic state trigger (set to don't care) or queries the current setting.	5-165
:TRIGger:LOGic:STATE:BIT:LOGic	Sets the logic of the logic state trigger or queries the current setting.	5-165
:TRIGger:LOGic:STATE:GROup<x>?	Queries all settings related to the group of the logic state trigger.	5-166
:TRIGger:LOGic:STATE:GROup<x>:CLEAr	Clears the entire condition to be satisfied for the group of the logic state trigger (set to don't care) or queries the current setting.	5-166
:TRIGger:LOGic:STATE:GROup<x>:CONDition	Sets the determination condition for the group of the logic state trigger or queries the current setting.	5-166
:TRIGger:LOGic:STATE:GROup<x>:HEXA	Sets the condition to be satisfied for the group of the logic state trigger in hexadecimal notation.	5-166
:TRIGger:LOGic:STATE:GROup<x>:PATtern	Sets the condition to be satisfied for the group of the logic state trigger in binary notation or queries the current setting.	5-166
:TRIGger:LOGic:STATE:GROup<x>:SYMBOL	Sets the symbol item for each group of the logic state trigger.	5-166
:TRIGger:LOGic:STATE:TYPE	Sets the setup type of the logic state trigger or queries the current setting.	5-166
:TRIGger:LOGic:WIDTH?	Queries all settings related to the logic pulse width trigger.	5-166
:TRIGger:LOGic:WIDTH:MODE	Sets the determination mode of the logic pulse width trigger or queries the current setting.	5-166
:TRIGger:LOGic:WIDTH:POLarity	Sets the polarity of the logic pulse width trigger or queries the current setting.	5-167
:TRIGger:LOGic:WIDTH:SOURce	Sets the trigger source of the logic pulse width trigger or queries the current setting.	5-167
:TRIGger:LOGic:WIDTH:TIME<x>	Sets the logic pulse width of the pulse width trigger or queries the current setting.	5-167
:TRIGger:MODE	Sets the trigger mode or queries the current setting.	5-167
:TRIGger:POSition	Sets the trigger position or queries the current setting.	5-167
:TRIGger:SCount (Single(N) Count)	Sets the number of times the trigger is to be activated when the trigger mode is Single(N) or queries the current setting.	5-167
:TRIGger:SOURce?	Queries all settings related to the trigger source.	5-167
:TRIGger:SOURce:CHANnel<x>?	Queries all settings related to the channel of the trigger source.	5-167
:TRIGger:SOURce:CHANnel<x>:COUPling	Sets the trigger coupling of the channel or queries the current setting.	5-167
:TRIGger:SOURce:CHANnel<x>:HFRejection (HighFrequencyREJECTION)	Sets the low pass filter (HF rejection) of the channel or queries the current setting.	5-167
:TRIGger:SOURce:CHANnel<x>:HYSTeresis	Sets the hysteresis of the channel or queries the current setting.	5-168

5.1 List of Commands

Command	Function	Page
:TRIGger:SOURce:CHANnel<x>:LEVel	Sets the trigger level of the channel or queries the current setting.	5-168
:TRIGger:SOURce:CHANnel<x>:STATe	Sets the condition to be satisfied of the channel or queries the current setting.	5-168
:TRIGger:SOURce:CHANnel<x>:WIDTh	Sets the window trigger width of the channel or queries the current setting.	5-168
:TRIGger:SOURce:CHANnel<x>:WINDow	Turns ON/OFF the window of the channel or queries the current setting.	5-168
:TRIGger:SOURce:EXTErnal?	Queries all settings related to the external trigger.	5-168
:TRIGger:SOURce:EXTErnal:LEVel	Sets the trigger level of the external trigger or queries the current setting.	5-168
:TRIGger:SOURce:EXTErnal:PROBe	Sets the probe attenuation of the external trigger or queries the current setting.	5-169
:TRIGger:SOURce:LOGic	Sets the trigger source logic or queries the current setting.	5-169
:TRIGger:TYPE	Sets the trigger type or queries the current setting.	5-169
:TRIGger:WIDTh?	Queries all settings related to the pulse width trigger.	5-169
:TRIGger:WIDTh:MODE	Sets the determination mode of the pulse width trigger or queries the current setting.	5-169
:TRIGger:WIDTh:POLarity	Sets the polarity of the pulse width trigger or queries the current setting.	5-169
:TRIGger:WIDTh:SOURce	Sets the trigger source of the pulse width trigger or queries the current setting.	5-169
:TRIGger:WIDTh:TIME<x>	Sets the pulse width of the pulse width trigger or queries the current setting.	5-169

WAVeform Group

:WAVeform?	Queries all information about the waveform data.	5-170
:WAVeform:BITS?	Queries the bit length of the waveform data specified by ":WAVeform:TRACe".	5-170
:WAVeform:BYTeorder	Sets the transmission order when using word format of two bytes or more or queries the current setting.	5-170
:WAVeform:END	Sets the last data point of the waveform specified by :WAVeform:TRACe or queries the current setting.	5-170
:WAVeform:FORMat	Sets the format of the data to be transmitted or queries the current setting.	5-170
:WAVeform:LENGth?	Queries the total number of points of the waveform specified by ":WAVeform:TRACe".	5-170
:WAVeform:OFFSet?	Queries the offset value when converting the waveform data specified by :WAVeform:TRACe to physical values.	5-170
:WAVeform:POSition?	Queries the vertical axis position used for converting to voltage when RBYTe is specified with: WAVeform:FORMat.	5-170
:WAVeform:RANGe?	Queries the range value when converting the waveform data specified by :WAVeform:TRACe to physical values.	5-170
:WAVeform:RECOrd	Sets the target record number for the commands in the WAVeform group or queries the current setting.	5-171
:WAVeform:RECOrd? MINimum	Queries the minimum record number of the history of the target channel.	5-171
:WAVeform:SEND?	Queries the waveform data specified by ":WAVeform:TRACe".	5-171
:WAVeform:SIGN?	Queries the existence of a sign when querying the waveform data specified by :WAVeform:TRACe using binary data.	5-171
:WAVeform:SRATe? (Sample RATE)	Queries the sample rate of the record specified by :WAVeform:RECOrd.	5-172
:WAVeform:STARt	Sets the first data point of the waveform specified by :WAVeform:TRACe or queries the current setting.	5-172
:WAVeform:TRACe	Sets the target waveform or queries the current setting.	5-172
:WAVeform:TRIGger?	Queries the trigger position of the record specified by :WAVeform:RECOrd.	5-172
:WAVeform:TYPE?	Queries the acquisition mode of the waveform specified by :WAVeform:TRACe.	5-172

5.1 List of Commands

Commnd	Function	Page
ZOOM Group		
:ZOOM?	Queries all settings related to the waveform zoom.	5-173
:ZOOM:ALLocation<x>?	Queries all settings related to the zoom source waveform.	5-173
:ZOOM:ALLocation<x>:ALLon	Sets all waveforms to be zoomed.	5-173
:ZOOM:ALLocation<x>:TRACe<x>	Turns ON/OFF the trace you wish to zoom or queries the current setting.	5-173
:ZOOM:FORMat<x>	Sets the display format of the zoom waveform or queries the current setting.	5-173
:ZOOM:HLINKage	Turns ON/OFF the horizontal link or queries the current setting.	5-173
:ZOOM:HORizontal<x>?	Queries all settings related to the horizontal zoom.	5-173
:ZOOM:HORizontal<x>:ASCRoll?	Queries all settings related to the auto scroll function.	5-173
:ZOOM:HORizontal<x>:ASCRoll: JUMP	Moves the zoom center position to the left or right edge of the main screen.	5-173
:ZOOM:HORizontal<x>:ASCRoll: SPEEd	Sets the auto scroll speed or queries the current setting.	5-173
:ZOOM:HORizontal<x>:ASCRoll: START	Starts auto scrolling.	5-173
:ZOOM:HORizontal<x>:ASCRoll: STOP	Stops auto scrolling.	5-173
:ZOOM:HORizontal<x>:MAG	Sets the horizontal zoom magnification or queries the current setting.	5-173
:ZOOM:HORizontal<x>:POSition	Sets the horizontal zoom center position or queries the current setting.	5-174
:ZOOM:MODE	Sets the zoom waveform display format or queries the current setting.	5-174
:ZOOM:VERTical<x>?	Queries all settings related to the vertical zoom.	5-174
:ZOOM:VERTical<x>:MAG	Sets the vertical zoom magnification or queries the current setting.	5-174
:ZOOM:VERTical<x>:POSition	Sets the vertical zoom position or queries the current setting.	5-174
:ZOOM:VERTical<x>:TRACe	Sets the trace you wish to display on the vertical zoom screen or queries the current setting.	5-174
:ZOOM:VLINKage	Turns ON/OFF the vertical link or queries the current setting.	5-174
Common Command Group		
*CAL? (CALibrate)	Performs calibration and queries the result.	5-175
*CLS (CLear Status)	Clears the standard event register, extended event register, and error queue.	5-175
*ESE (standard Event Status Enable register)	Sets the standard event enable register or queries the current setting.	5-175
*ESR? (standard Event Status Register)	Queries the standard event register and clears the register.	5-175
*IDN? (IDeNtify)	Queries the instrument model.	5-175
*OPC (OPeration Complete)	Sets bit 0 (OPC bit) of the standard event register to 1 upon the completion of the specified overlap command.	5-175
*OPC? (OPeration Complete)	If *OPC? is transmitted and the specified overlap command is completed, ASCII code 1 is returned.	5-176
*OPT? (OPTion)	Queries the installed options.	5-176
*PSC (Power-on Status Clear)	Sets whether or not to clear the registers below at power on or queries the current setting. The register is cleared when the value rounded to an integer is a non-zero value.	5-176
*RST (ReSeT)	Initializes the settings.	5-176
*SRE (Service Request Enable register)	Sets the service request enable register or queries the current setting.	5-176
*STB? (STatus Byte)	Queries the status byte register.	5-176
*TST?	Performs a self-test and queries the result. The self test involves internal memory tests.	5-176
*WAI (WAIt)	Holds the subsequent command until the completion of the specified overlap operation.	5-177

5.2 ACQuire Group

:ACQuire?

Function Queries all settings related to the waveform acquisition.

Syntax :ACQuire?

:ACQuire:AVERage?

Function Queries all settings related to averaging and the waveform acquisition count.

Syntax :ACQuire:AVERage?

:ACQuire:AVERage:COUNT

Function Sets the waveform acquisition count of averaging mode or queries the current setting.

Syntax :ACQuire:AVERage:COUNT {<NRf>}
:ACQuire:AVERage:COUNT?

<NRf> = 2 to 1024 in 2ⁿ steps

Example :ACQUIRE: AVERAGE: COUNT 2
:ACQUIRE: AVERAGE: COUNT? -> :ACQUIRE:
AVERAGE: COUNT 2

:ACQuire:HRMode

Function Turns ON/OFF the high resolution mode or queries the current setting.

Syntax :ACQuire:HRMode {<Boolean>}
:ACQuire:HRMode?

Example :ACQUIRE: HRMODE ON
:ACQUIRE: HRMODE? -> :ACQUIRE: HRMODE 1

:ACQuire:INTERLeave

Function Turns ON/OFF interleave or queries the current setting.

Syntax :ACQuire:INTERLeave {<Boolean>}
:ACQuire:INTERLeave?

Example :ACQUIRE: INTERLEAVE ON
:ACQUIRE: INTERLEAVE? -> :ACQUIRE:
INTERLEAVE 1

:ACQuire:MODE

Function Sets the waveform acquisition mode or queries the current setting.

Syntax :ACQuire:MODE {AVERage|ENVELOpe|NORMAL}
:ACQuire:MODE?

Example :ACQUIRE: MODE NORMAL
:ACQUIRE: MODE? -> :ACQUIRE: MODE NORMAL

:ACQuire:REPetitive

Function Turns ON/OFF the repetitive sampling or queries the current setting.

Syntax :ACQuire:REPetitive {<Boolean>}
:ACQuire:REPetitive?

Example :ACQUIRE: REPETITIVE ON
:ACQUIRE: REPETITIVE? -> :ACQUIRE:
REPETITIVE 1

:ACQuire:RELENgth

Function Sets the record length or queries the current setting.

Syntax :ACQuire:RELENgth {<NRf>}
:ACQuire:RELENgth?
<NRf> = See the DL6000/DLM6000 User's Manual.

Example :ACQUIRE: RLENGTH 6250000
:ACQUIRE: RLENGTH?
-> :ACQUIRE: RLENGTH 6250000

:ACQuire:SAMpling

Function Sets or queries the sampling mode.

Syntax :ACQuire:SAMpling {REAL|INTERpolate|REP
etitive}
:ACQuire:SAMpling?

Example :ACQUIRE: SAMPLING REAL
:ACQUIRE: SAMPLING? -> :ACQUIRE: SAMPLING
REAL

5.3 ANALysis Group

:ANALysis?

Function Queries all settings related to the analysis function.
Syntax :ANALysis?

:ANALysis:AHISTogram<x>?

Function Queries all settings related to the accumulated histogram function.
Syntax :ANALysis:AHISTogram<x>?
<x> = 1 or 2

:ANALysis:AHISTogram<x>:HORizontal

Function Sets the horizontal range of the accumulated histogram or queries the current setting.
Syntax :ANALysis:AHISTogram<x>:HORizontal
{<NRF>,<NRF>}
:ANALysis:AHISTogram<x>:HORizontal?
<x> = 1 or 2
<NRF> = -4 to 4 (div)
Example :ANALYSIS:AHISTOGRAM1:HORIZONTAL 0,1
:ANALYSIS:AHISTOGRAM1:HORIZONTAL?
-> :ANALYSIS:AHISTOGRAM1:
HORIZONTAL 0.000E+00,0.000E+00

:ANALysis:AHISTogram<x>:MEASure?

Function Queries all settings related automated measurement of the accumulated histogram.
Syntax :ANALysis:AHISTogram<x>:MEASure?
<x> = 1 or 2

:ANALysis:AHISTogram<x>:MEASure:CURSor?

Function Queries all settings related to cursor measurement of the accumulated histogram.
Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor?
<x> = 1 or 2

:ANALysis:AHISTogram<x>:MEASure:CURSor:BASic?

Function Queries all settings related to basic items of the cursor of the accumulated histogram.
Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor:BASic?
<x> = 1 or 2

:ANALysis:AHISTogram<x>:MEASure:CURSor[:BASic]:ALL

Function Turns ON/OFF all basic items of the cursor of the accumulated histogram.
Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor[:BASic]:ALL {<Boolean>}
<x> = 1 or 2
Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
BASIC:ALL ON

:ANALysis:AHISTogram<x>:MEASure:CURSor[:BASic]:C<x>?

Function Queries all settings related to the cursor of the accumulated histogram.
Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor[:BASic]:C<x>?
<x> of AHISTogram<x> = 1 or 2
<x> of C<x> = 1 or 2

:ANALysis:AHISTogram<x>:MEASure:CURSor[:BASic]:C<x>:STATE

Function Turns ON/OFF the cursor of the accumulated histogram or queries the current setting.
Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor[:BASic]:C<x>:STATE {<Boolean>}
:ANALysis:AHISTogram<x>:MEASure:CURSor[:BASic]:C<x>:STATE?
<x> of AHISTogram<x> = 1 or 2
<x> of C<x> = 1 or 2
Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
BASIC:C1:STATE ON
:ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
BASIC:C1:STATE? -> :ANALYSIS:
AHISTOGRAM1:MEASURE:CURSOR:
BASIC:C1:STATE 1

:ANALysis:AHISTogram<x>:MEASure:CURSor[:BASic]:C<x>:VALue?

Function Queries the measured value of the cursor of the accumulated histogram.
Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor[:BASic]:C<x>:VALue?
<x> of AHISTogram<x> = 1 or 2
<x> of C<x> = 1 or 2
Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
BASIC:C1:VALUE? -> :ANALYSIS:
AHISTOGRAM1:MEASURE:CURSOR:
BASIC:C1:VALUE 1.000E+00

**:ANALysis:AHISTogram<x>:MEASure:
CURSor[:BASic]:DC?**

Function Queries all settings related to measured values between cursors of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:
CURSor[:BASic]:DC?
<x> = 1 or 2

**:ANALysis:AHISTogram<x>:MEASure:
CURSor[:BASic]:DC:STATE**

Function Turns ON/OFF the measured values between cursors of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:
CURSor[:BASic]:DC:STATE {<Boolean>}
:ANALysis:AHISTogram<x>:MEASure:
CURSor[:BASic]:DC:STATE?
<x> = 1 or 2

Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
BASIC:DC:STATE ON
:ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
BASIC:DC:STATE? -> :ANALYSIS:
AHISTOGRAM1:MEASURE:CURSOR:BASIC:DC:
STATE 1

**:ANALysis:AHISTogram<x>:MEASure:
CURSor[:BASic]:DC:VALUE?**

Function Queries the measured value between cursors of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:
CURSor[:BASic]:DC:VALUE?
<x> = 1 or 2

Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
BASIC:DC:VALUE? -> :ANALYSIS:
AHISTOGRAM1:MEASURE:CURSOR:
BASIC:DC:VALUE 1.000E+00

**:ANALysis:AHISTogram<x>:MEASure:
CURSor:CALCulation?**

Function Queries all settings related to calculation items of the cursor of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor:
CALCulation?
<x> = 1 or 2

**:ANALysis:AHISTogram<x>:MEASure:
CURSor:CALCulation:ALL**

Function Turns ON/OFF all calculation items of the cursor of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor:
CALCulation:ALL {<Boolean>}
<x> = 1 or 2

Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
CALCULATION:ALL ON

**:ANALysis:AHISTogram<x>:MEASure:
CURSor:CALCulation:DEFINE<x>**

Function Sets the equation of the calculation item of the cursor of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor:
CALCulation:DEFINE<x> {<String>}
:ANALysis:AHISTogram<x>:MEASure:CURSor:
CALCulation:DEFINE<x>?
<x> of AHISTogram<x> = 1 or 2
<x> of DEFINE<x> = 1 to 4
<String> = Up to 128 characters

Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
CALCULATION:DEFINE1 "C1"
:ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
CALCULATION:DEFINE1? -> :ANALYSIS:
AHISTOGRAM1:MEASURE:CURSOR:
CALCULATION:DEFINE1 "C1"

**:ANALysis:AHISTogram<x>:MEASure:
CURSor:CALCulation:STATE<x>**

Function Turns ON/OFF the calculation item of the cursor of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor:
CALCulation:STATE<x> {<Boolean>}
:ANALysis:AHISTogram<x>:MEASure:CURSor:
CALCulation:STATE<x>?
<x> of AHISTogram<x> = 1 or 2
<x> of STATE<x> = 1 to 4

Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
CALCULATION:STATE1 ON
:ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
CALCULATION:STATE1? -> :ANALYSIS:
AHISTOGRAM1:MEASURE:CURSOR:
CALCULATION:STATE1 1

**:ANALysis:AHISTogram<x>:MEASure:
CURSor:CALCulation:VALUE<x>?**

Function Queries the measured value of the calculation item of the cursor of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor:
CALCulation:VALUE<x>?
<x> of AHISTogram<x> = 1 or 2
<x> of VALUE<x> = 1 to 4

Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
CALCULATION:VALUE1? -> :ANALYSIS:
AHISTOGRAM1:MEASURE:CURSOR:
CALCULATION:VALUE1 1.000E+00

5.3 ANALysis Group

:ANALysis:AHISTogram<x>:MEASure: CURSor:HLINKage

Function Turns ON/OFF the ΔV cursor link of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor:
HLINKage {<Boolean>}
:ANALysis:AHISTogram<x>:MEASure:CURSor:
HLINKage?
<x> = 1 or 2

Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
HLINKAGE ON
:ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
HLINKAGE? -> :ANALYSIS:AHISTOGRAM1:
MEASURE:CURSOR:HLINKAGE 1

:ANALysis:AHISTogram<x>:MEASure: CURSor:HPOStion<x>

Function Sets the ΔV cursor position of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor:
HPOStion<x> {<NRf>}
:ANALysis:AHISTogram<x>:MEASure:CURSor:
HPOStion<x>?
<x> of AHISTogram<x> = 1 or 2
<x> of HPOStion<x> = 1 or 2
<NRf> = -5 to 5 div

Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
HPOSITION1 1
:ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
HPOSITION1? -> :ANALYSIS:AHISTOGRAM1:
MEASURE:CURSOR:
HPOSITION1 1.000E+00

:ANALysis:AHISTogram<x>:MEASure: CURSor:VLINKage

Function Turns ON/OFF the ΔT cursor link of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor:
VLINKage {<Boolean>}
:ANALysis:AHISTogram<x>:MEASure:CURSor:
VLINKage?
<x> = 1 or 2

Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
VLINKAGE ON
:ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
VLINKAGE? -> :ANALYSIS:AHISTOGRAM1:
MEASURE:CURSOR:VLINKAGE 1

:ANALysis:AHISTogram<x>:MEASure: CURSor:VPOStion<x>

Function Sets the ΔT cursor position of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:CURSor:
VPOStion<x> {<NRf>}
:ANALysis:AHISTogram<x>:MEASure:CURSor:
VPOStion<x>?
<x> of AHISTogram<x> = 1 and 2
<x> of VPOStion<x> = 1 and 2
<NRf> = -4 to 4 (div)

Example :ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
VPOSITION1 1
:ANALYSIS:AHISTOGRAM1:MEASURE:CURSOR:
VPOSITION1? -> :ANALYSIS:AHISTOGRAM1:
MEASURE:CURSOR:
VPOSITION1 1.000E+00

:ANALysis:AHISTogram<x>:MEASure:MODE

Function Sets the automated measurement mode of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:MODE
{CURSor|OFF|PARAMeter}
:ANALysis:AHISTogram<x>:MEASure:MODE?
<x> = 1 or 2

Example :ANALYSIS:AHISTOGRAM1:MEASURE:
MODE CURSOR
:ANALYSIS:AHISTOGRAM1:MEASURE:MODE?
-> :ANALYSIS:AHISTOGRAM1:MEASURE:
MODE CURSOR

:ANALysis:AHISTogram<x>:MEASure: PARAMeter?

Function Queries all settings related to the automated measurement of waveform parameters of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAMeter?
<x> = 1 or 2

:ANALysis:AHISTogram<x>:MEASure: PARAMeter:AREA<x>?

Function Queries all settings related to the area of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAMeter:AREA<x>?
<x> of AHISTogram<x> = 1 and 2
<x> of AREA<x> = 1 or 2

**:ANALysis:AHISTogram<x>:MEASure:
PARAmeter:AREA<x>:ALL**

Function Turns ON/OFF all waveform parameters of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAmeter:AREA<x>:ALL {<Boolean>}
<x> of AHISTogram<x> = 1 or 2
<x> of AREA<x> = 1 or 2

Example :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:AREA1:ALL ON

**:ANALysis:AHISTogram<x>:MEASure:
PARAmeter:AREA<x>:<Parameter>?**

Function Queries all settings related to the waveform parameter of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAmeter:AREA<x>:<Parameter>?
<x> of AHISTogram<x> = 1 or 2
<x> of AREA<x> = 1 or 2
<Parameter> = {MAXimum|MEAN|MEDIan|
MINimum|PEAK|RMS|SD2integ|SD3integ|
SDEVIation|SDINtegr}

**:ANALysis:AHISTogram<x>:MEASure:
PARAmeter:AREA<x>:<Parameter>:STATE**

Function Turns ON/OFF the waveform parameter of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAmeter:AREA<x>:<Parameter>:
STATE {<Boolean>}
:ANALysis:AHISTogram<x>:MEASure:
PARAmeter:AREA<x>:<Parameter>:STATE?
<x> of AHISTogram<x> = 1 or 2
<x> of AREA<x> = 1 or 2
<Parameter> = {MAXimum|MEAN|MEDIan|
MINimum|PEAK|RMS|SD2integ|SD3integ|
SDEVIation|SDINtegr}

Example (The following is an example for the maximum value of area 1.)

```
:ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:AREA1:MAXIMUM:STATE ON
:ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:AREA1:MAXIMUM:STATE?
-> :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:AREA1:MAXIMUM:STATE 1
```

**:ANALysis:AHISTogram<x>:MEASure:
PARAmeter:AREA<x>:<Parameter>:VALUE?**

Function Queries the automated measured value of the waveform parameter of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAmeter:AREA<x>:<Parameter>:VALUE?
<x> of AHISTogram<x> = 1 or 2
<x> of AREA<x> = 1 or 2
<Parameter> = {MAXimum|MEAN|MEDIan|
MINimum|PEAK|RMS|SD2integ|SD3integ|
SDEVIation|SDINtegr}

Example (The following is an example for the maximum value of area 1.)

```
:ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:AREA1:MAXIMUM:VALUE?
-> :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:AREA1:MAXIMUM:VALUE 1.000E+00
```

**:ANALysis:AHISTogram<x>:MEASure:
PARAmeter:CALCulation?**

Function Queries all settings related to the calculation items of waveform parameters of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAmeter:CALCulation?
<x> = 1 or 2

**:ANALysis:AHISTogram<x>:MEASure:
PARAmeter:CALCulation:ALL**

Function Turns ON/OFF all calculation items of the waveform parameters of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAmeter:CALCulation:ALL {<Boolean>}
<x> = 1 or 2

Example :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:CALCULATION:ALL ON

**:ANALysis:AHISTogram<x>:MEASure:
PARAmeter:CALCulation:DEFINE<x>**

Function Sets the equation of the calculation items of the waveform parameter of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAmeter:CALCulation:
DEFINE<x> {<String>}
:ANALysis:AHISTogram<x>:MEASure:
PARAmeter:CALCulation:DEFINE<x>?
<x> of AHISTogram<x> = 1 or 2
<x> of DEFINE<x> = 1 to 4
<String> = Up to 128 characters

Example :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:CALCULATION:DEFINE1 "MEAN"
:ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:CALCULATION:DEFINE1?
-> :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:CALCULATION:DEFINE1 "MEAN"

5.3 ANALysis Group

:ANALysis:AHISTogram<x>:MEASure:

PARAMeter:CALCulation:STATe<x>

Function Turns ON/OFF the calculation items of the waveform parameter of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAMeter:CALCulation:STATe<x>
{<Boolean>}
:ANALysis:AHISTogram<x>:MEASure:
PARAMeter:CALCulation:STATe<x>?
<x> of AHISTogram<x> = 1 or 2
<x> of STATe<x> = 1 to 4

Example :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:CALCULATION:STATE1 ON
:ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:CALCULATION:STATE1?
-> :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:CALCULATION:STATE1 1

:ANALysis:AHISTogram<x>:MEASure:

PARAMeter:CALCulation:VALue<x>?

Function Queries the automated measured value of the calculation items of the waveform parameter of the accumulated histogram.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAMeter:CALCulation:VALue<x>?
<x> of AHISTogram<x> = 1 or 2
<x> of VALue<x> = 1 to 4

Example :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:CALCULATION:VALUE1?
-> :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:CALCULATION:VALUE1 1.000E+00

:ANALysis:AHISTogram<x>:MEASure:

PARAMeter:HRANge<x>

Function Sets the horizontal range of the waveform parameter of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAMeter:HRANge<x> {<NRf>,<NRf>}
:ANALysis:AHISTogram<x>:MEASure:
PARAMeter:HRANge<x>?
<x> of AHISTogram<x> = 1 or 2
<x> of HRANge<x> = 1 or 2
<NRf> = -5 to 5 div

Example :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:HRANGE1 1,2
:ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:HRANGE1? -> :ANALYSIS:
AHISTOGRAM1:MEASURE:PARAMETER:
HRANGE1 2.000E+00,1.000E+00

:ANALysis:AHISTogram<x>:MEASure:

PARAMeter:VRANge<x>

Function Sets the vertical range of the waveform parameter of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MEASure:
PARAMeter:VRANge<x> {<NRf>,<NRf>}
:ANALysis:AHISTogram<x>:MEASure:
PARAMeter:VRANge<x>?
<x> of AHISTogram<x> = 1 or 2
<x> of VRANge<x> = 1 or 2
<NRf> = -4 to 4 (div)

Example :ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:VRANGE1 1,2
:ANALYSIS:AHISTOGRAM1:MEASURE:
PARAMETER:VRANGE1? -> :ANALYSIS:
AHISTOGRAM1:MEASURE:PARAMETER:
VRANGE1 2.000E+00,1.000E+00

:ANALysis:AHISTogram<x>:MODE

Function Sets the accumulated histogram mode or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:MODE
{HORizontal|VERTical}
:ANALysis:AHISTogram<x>:MODE?
<x> = 1 or 2

Example :ANALYSIS:AHISTOGRAM1:MODE HORIZONTAL
:ANALYSIS:AHISTOGRAM1:MODE?
-> :ANALYSIS:AHISTOGRAM1:MODE HORIZONTAL

:ANALysis:AHISTogram<x>:TRACe

Function Sets the source trace of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:TRACe {<NRf>}
:ANALysis:AHISTogram<x>:TRACe?
<x> = 1 or 2
<NRf> = 1 to 8

Example :ANALYSIS:AHISTOGRAM1:TRACE 1
:ANALYSIS:AHISTOGRAM1:TRACE?
-> :ANALYSIS:AHISTOGRAM1:TRACE 1

:ANALysis:AHISTogram<x>:VERTical

Function Sets the vertical range of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:VERTical
{<NRf>,<NRf>}
:ANALysis:AHISTogram<x>:VERTical?
<x> = 1 or 2
<NRf> = -4 to 4 (div)

Example :ANALYSIS:AHISTOGRAM1:VERTICAL 1,2
:ANALYSIS:AHISTOGRAM1:VERTICAL?
-> :ANALYSIS:AHISTOGRAM1:
VERTICAL 2.000E+00,1.000E+00

:ANALysis:AHISTogram<x>:WINDow

Function Sets the measurement target window of the accumulated histogram or queries the current setting.

Syntax :ANALysis:AHISTogram<x>:WINDow {MAIN|Z1|Z2}
:ANALysis:AHISTogram<x>:WINDow?
<x> = 1 or 2

Example :ANALYSIS:AHISTOGRAM1:WINDOW MAIN
:ANALYSIS:AHISTOGRAM1:WINDOW?
-> :ANALYSIS:AHISTOGRAM1:WINDOW MAIN

:ANALysis:FFT<x>?

Function Queries all settings related to the FFT computation function.

Syntax :ANALysis:FFT<x>?
<x> = 1 or 2

:ANALysis:FFT<x>:AVERage?

Function Queries all FFT analysis averaging settings.

Syntax :ANALysis:FFT<x>:AVERage?
<x> = 1 or 2

:ANALysis:FFT<x>:AVERage:EWEight

Function Sets or queries the attenuation constant of exponential averaging in FFT analysis.

Syntax :ANALysis:FFT<x>:AVERage:EWEight {<NRf>}
:ANALysis:FFT<x>:AVERage:EWEight?
<x> = 1 or 2
<NRf> = 2 to 1024 (in 2n steps)

Example :ANALYSIS:FFT1:AVERAGE:EWEIGHT 2
:ANALYSIS:FFT1:AVERAGE:EWEIGHT? -> :
ANALYSIS:FFT1:AVERAGE:EWEIGHT 2

:ANALysis:FFT<x>:HORizontal?

Function Queries all settings related the horizontal axis of the FFT computation.

Syntax :ANALysis:FFT<x>:HORizontal?
<x> = 1 or 2

:ANALysis:FFT<x>:HORizontal:CSPan?

Function Queries all settings related to the center and span of the horizontal axis of the FFT computation.

Syntax :ANALysis:FFT<x>:HORizontal:CSPan?
<x> = 1 or 2

:ANALysis:FFT<x>:HORizontal:CSPan:CENTer

Function Sets the horizontal center of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:HORizontal:CSPan:CENTer {<Frequency>}
:ANALysis:FFT<x>:HORizontal:CSPan:CENTer?
<x> = 1 or 2
<Frequency> = 0 to 250 G (Hz)

Example :ANALYSIS:FFT1:HORIZONTAL:CSPAN:
CENTER 1HZ
:ANALYSIS:FFT1:HORIZONTAL:CSPAN:CENTER?
-> :ANALYSIS:FFT1:HORIZONTAL:CSPAN:
CENTER 1.000E+00

:ANALysis:FFT<x>:HORizontal:CSPan:SPAN

Function Sets the horizontal span of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:HORizontal:CSPan:SPAN {<Frequency>}
:ANALysis:FFT<x>:HORizontal:CSPan:SPAN?
<x> = 1 or 2
<Frequency> = 0 to 250 G (Hz)

Example :ANALYSIS:FFT1:HORIZONTAL:CSPAN:
SPAN 1HZ
:ANALYSIS:FFT1:HORIZONTAL:CSPAN:SPAN?
-> :ANALYSIS:FFT1:HORIZONTAL:CSPAN:
SPAN 1.000E+00

:ANALysis:FFT<x>:HORizontal:LRIGHT?

Function Queries all settings related the left and right edges of the horizontal axis of the FFT computation.

Syntax :ANALysis:FFT<x>:HORizontal:LRIGHT?
<x> = 1 or 2

:ANALysis:FFT<x>:HORizontal:LRIGHT:RANGE

Function Sets the range of the horizontal left and right edges of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:HORizontal:LRIGHT:RANGE {<Frequency>, <Frequency>}
:ANALysis:FFT<x>:HORizontal:LRIGHT:RANGE?
<x> = 1 or 2
<Frequency> = 0 to 250 G (Hz)

Example :ANALYSIS:FFT1:HORIZONTAL:LRIGHT:
RANGE 1HZ, 2HZ
:ANALYSIS:FFT1:HORIZONTAL:LRIGHT:RANGE?
-> :ANALYSIS:FFT1:HORIZONTAL:LRIGHT:
RANGE 2.000E+00, 1.000E+00

5.3 ANALysis Group

:ANALysis:FFT<x>:HORIZontal:MODE

Function Sets the horizontal mode of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:HORIZontal:MODE {AUTO|CSPan|LRIGHT}
:ANALysis:FFT<x>:HORIZontal:MODE?
<x> = 1 or 2

Example :ANALYSIS:FFT1:HORIZONTAL:MODE AUTO
:ANALYSIS:FFT1:HORIZONTAL:MODE?
-> :ANALYSIS:FFT1:HORIZONTAL:MODE AUTO

:ANALysis:FFT<x>:LENGth

Function Sets the number of FFT points of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:LENGth {<Nrf>}
:ANALysis:FFT<x>:LENGth?
<x> = 1 or 2
<Nrf> = 2500, 6250, 12500, 25000, 62500, 125000, or 250000

Example :ANALYSIS:FFT1:LENGTH 2500
:ANALYSIS:FFT1:LENGTH? -> :ANALYSIS:FFT1:LENGTH 2500

:ANALysis:FFT<x>:MEASure?

Function Queries all settings related to the automated measurement of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure?
<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:MARKer?

Function Queries all settings related to the marker cursor measurement of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:MARKer?
<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:

MARKer:BASic?

Function Queries all settings related to basic items of the marker cursor of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:MARKer:BASic?
<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:

MARKer[:BASic]:ALL

Function Turns ON/OFF all basic items of the marker cursor of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:MARKer[:BASic]:ALL {<Boolean>}
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:ALL ON

:ANALysis:FFT<x>:MEASure:

MARKer[:BASic]:DFRequency?

Function Queries all settings related to the frequency value between marker cursors of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:MARKer[:BASic]:DFRequency?
<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:

MARKer[:BASic]:DFRequency:STATe

Function Turns ON/OFF the frequency value between marker cursors of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:MARKer[:BASic]:DFRequency:STATe {<Boolean>}
:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:DFRequency:STATe?
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:DFREQUENCY:STATE ON
:ANALYSIS:FFT1:MEASURE:MARKER:BASIC:DFREQUENCY:STATE? -> :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:DFREQUENCY:STATE 1

:ANALysis:FFT<x>:MEASure:

MARKer[:BASic]:DFRequency:VALue?

Function Queries the frequency value between marker cursors of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:MARKer[:BASic]:DFRequency:VALue?
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:DFREQUENCY:VALUE? -> :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:DFREQUENCY:VALUE 1.000E+00

:ANALysis:FFT<x>:MEASure:

MARKer[:BASic]:DV?

Function Queries all settings related to the power value between marker cursors of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:MARKer[:BASic]:DV?
<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:**MARKer[:BASic]:DV:STATE**

Function Turns ON/OFF the power value between marker cursors of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:DV:STATE {<Boolean>}
:ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:DV:STATE?
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:DV:
STATE ON
:ANALYSIS:FFT1:MEASURE:MARKER:BASIC:DV:
STATE? -> :ANALYSIS:FFT1:MEASURE:
MARKER:BASIC:DV:STATE 1

:ANALysis:FFT<x>:MEASure:**MARKer[:BASic]:DV:VALUE?**

Function Queries the power value between marker cursors of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:DV:VALUE?
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:DV:
VALUE? -> :ANALYSIS:FFT1:MEASURE:
MARKER:BASIC:DV:VALUE 1.000E+00

:ANALysis:FFT<x>:MEASure:**MARKer[:BASic]:FREQuency<x>?**

Function Queries all settings related to the frequency value of the marker cursor of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:FREQuency<x>?
<x> of FFT<x> = 1 or 2
<x> of FREQuency<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:**MARKer[:BASic]:FREQuency<x>:STATE**

Function Turns ON/OFF the frequency value of the marker cursor of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:FREQuency<x>:
STATE {<Boolean>}
:ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:FREQuency<x>:STATE?
<x> of FFT<x> = 1 or 2
<x> of FREQuency<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:
FREQUENCY1:STATE ON
:ANALYSIS:FFT1:MEASURE:MARKER:BASIC:
FREQUENCY1:STATE? -> :ANALYSIS:FFT1:
MEASURE:MARKER:BASIC:FREQUENCY1:STATE 1

:ANALysis:FFT<x>:MEASure:**MARKer[:BASic]:FREQuency<x>:VALue?**

Function Queries the frequency value of the marker cursor of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:FREQuency<x>:VALue?
<x> of FFT<x> = 1 or 2
<x> of FREQuency<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:
FREQUENCY1:VALUE? -> :ANALYSIS:FFT1:
MEASURE:MARKER:BASIC:FREQUENCY1:
VALUE 1.000E+00

:ANALysis:FFT<x>:MEASure:**MARKer[:BASic]:POSition<x> {<NRf>}**

Function Sets the marker cursor position of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:POSition<x> {<NRf>}
:ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:POSition<x>?
<x> of FFT<x> = 1 or 2
<x> of POSition<x> = 1 or 2
<NRf> = -5 to 5 (div)

Example :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:
POSITION1 1
:ANALYSIS:FFT1:MEASURE:MARKER:BASIC:
POSITION1? -> :ANALYSIS:FFT1:MEASURE:
MARKER:BASIC:POSITION1 1.000E+00

:ANALysis:FFT<x>:MEASure:**MARKer[:BASic]:V<x>?**

Function Queries all settings related to the power value of the marker cursor of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:V<x>?
<x> of FFT<x> = 1 or 2
<x> of V<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:**MARKer[:BASic]:V<x>:STATE**

Function Turns ON/OFF the power value of the marker cursor of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:V<x>:STATE {<Boolean>}
:ANALysis:FFT<x>:MEASure:
MARKer[:BASic]:V<x>:STATE?
<x> of FFT<x> = 1 or 2
<x> of V<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:V1:
STATE ON
:ANALYSIS:FFT1:MEASURE:MARKER:BASIC:V1:
STATE? -> :ANALYSIS:FFT1:MEASURE:
MARKER:BASIC:V1:STATE 1

5.3 ANALysis Group

:ANALysis:FFT<x>:MEASure:MARKer[:BASic]:V<x>:VALue?

Function Queries the power value of the marker cursor of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:MARKer[:BASic]:V<x>:VALue?
<x> of FFT<x> = 1 or 2
<x> of V<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:V1:VALUE? -> :ANALYSIS:FFT1:MEASURE:MARKER:BASIC:V1:VALUE 1.000E+00

:ANALysis:FFT<x>:MEASure:MARKer:CALCulation?

Function Queries all settings related to calculation items of the marker cursor of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:MARKer:CALCulation?
<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:MARKer:CALCulation:ALL

Function Turns ON/OFF all calculation items of the marker cursor of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:MARKer:CALCulation:ALL {<Boolean>}
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:MARKER:CALCULATION:ALL ON

:ANALysis:FFT<x>:MEASure:MARKer:CALCulation:DEFine<x>

Function Sets the equation of the calculation items of the marker cursor of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:MARKer:CALCulation:DEFine<x> {<String>}
:ANALysis:FFT<x>:MEASure:MARKer:CALCulation:DEFine<x>?
<x> of FFT<x> = 1 or 2
<x> of DEFine<x> = 1 to 4
<String> = Up to 128 characters

Example :ANALYSIS:FFT1:MEASURE:MARKER:CALCULATION:DEFINE1 "V(F1)"
:ANALYSIS:FFT1:MEASURE:MARKER:CALCULATION:DEFINE1? -> :ANALYSIS:FFT1:MEASURE:MARKER:CALCULATION:DEFINE1 "V(F1)"

:ANALysis:FFT<x>:MEASure:MARKer:CALCulation:STATe<x>

Function Turns ON/OFF the calculation items of the marker cursor of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:MARKer:CALCulation:STATe<x> {<Boolean>}
:ANALysis:FFT<x>:MEASure:MARKer:CALCulation:STATe<x>?
<x> of FFT<x> = 1 or 2
<x> of STATe<x> = 1 to 4

Example :ANALYSIS:FFT1:MEASURE:MARKER:CALCULATION:STATE1 ON
:ANALYSIS:FFT1:MEASURE:MARKER:CALCULATION:STATE1? -> :ANALYSIS:FFT1:MEASURE:MARKER:CALCULATION:STATE1 1

:ANALysis:FFT<x>:MEASure:MARKer:CALCulation:VALue<x>?

Function Queries the measured value of the calculation items of the marker cursor of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:MARKer:CALCulation:VALue<x>?
<x> of FFT<x> = 1 or 2
<x> of VALue<x> = 1 to 4

Example :ANALYSIS:FFT1:MEASURE:MARKER:CALCULATION:VALUE1? -> :ANALYSIS:FFT1:MEASURE:MARKER:CALCULATION:VALUE1 1.000E+00

:ANALysis:FFT<x>:MEASure:MODE

Function Sets the automated measurement mode of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:MODE {MARKer|OFF|PEAK}
:ANALysis:FFT<x>:MEASure:MODE?
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:MODE MARKER
:ANALYSIS:FFT1:MEASURE:MODE?
-> :ANALYSIS:FFT1:MEASURE:MODE MARKER

:ANALysis:FFT<x>:MEASure:PEAK?

Function Queries all settings related to the peak value measurement of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK?
<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:

PEAK:BASic?

Function Queries all settings related to basic items of the peak value of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK:BASic?
<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:**PEAK[:BASic]:ALL**

Function Turns ON/OFF all basic items of the peak value of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:
PEAK[:BASic]:ALL {<Boolean>}
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:PEAK:BASIC:
ALL ON

:ANALysis:FFT<x>:MEASure:**PEAK[:BASic]:DFrequency?**

Function Queries all settings related to the frequency value between peak values of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
DFrequency?
<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:**PEAK[:BASic]:DFrequency:STATe**

Function Turns ON/OFF the frequency value between peak values of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
DFrequency:STATe {<Boolean>}
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
DFrequency:STATe?
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:PEAK:BASIC:
DFREQUENCY:STATE ON
:ANALYSIS:FFT1:MEASURE:PEAK:BASIC:
DFREQUENCY:STATE? -> :ANALYSIS:FFT1:
MEASURE:PEAK:BASIC:DFREQUENCY:STATE 1

:ANALysis:FFT<x>:MEASure:**PEAK[:BASic]:DFrequency:VALue?**

Function Queries the frequency value between peak values of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
DFrequency:VALue?
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:PEAK:BASIC:
DFREQUENCY:VALUE? -> :ANALYSIS:FFT1:
MEASURE:PEAK:BASIC:DFREQUENCY:
VALUE 1.000E+00

:ANALysis:FFT<x>:MEASure:**PEAK[:BASic]:DV?**

Function Queries all settings related to the power value between peak values of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
DV?
<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:**PEAK[:BASic]:DV:STATe**

Function Turns ON/OFF the power value between peak values of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
DV:STATe {<Boolean>}
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
DV:STATe?
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:PEAK:BASIC:DV:
STATE ON
:ANALYSIS:FFT1:MEASURE:PEAK:BASIC:DV:
STATE? -> :ANALYSIS:FFT1:MEASURE:PEAK:
BASIC:DV:STATE 1

:ANALysis:FFT<x>:MEASure:**PEAK[:BASic]:DV:VALue?**

Function Queries the power value between peak values of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
DV:VALue?
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:PEAK:BASIC:DV:
VALUE? -> :ANALYSIS:FFT1:MEASURE:PEAK:
BASIC:DV:VALUE 1.000E+00

:ANALysis:FFT<x>:MEASure:**PEAK[:BASic]:FREQuency<x>?**

Function Queries all settings related to the peak frequency value of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
FREQuency<x>?
<x> of FFT<x> = 1 or 2
<x> of FREQuency<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:**PEAK[:BASic]:FREQuency<x>:STATe**

Function Turns ON/OFF the peak frequency value of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:F
REQuency<x>:STATe {<Boolean>}
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
FREQuency<x>:STATe?
<x> of FFT<x> = 1 or 2
<x> of FREQuency<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:PEAK:BASIC:
FREQUENCY1:STATE ON
:ANALYSIS:FFT1:MEASURE:PEAK:BASIC:
FREQUENCY1:STATE? -> :ANALYSIS:FFT1:
MEASURE:PEAK:BASIC:FREQUENCY1:STATE 1

5.3 ANALysis Group

:ANALysis:FFT<x>:MEASure:

PEAK[:BASic]:FREQuency<x>:VALue?

Function Queries the peak frequency value of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
FREQuency<x>:VALue?
<x> of FFT<x> = 1 or 2
<x> of FREQuency<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:PEAK:BASIC:
FREQUENCY1:VALUE? -> :ANALYSIS:FFT1:
MEASURE:PEAK:BASIC:FREQUENCY1:
VALUE 1.000E+00

:ANALysis:FFT<x>:MEASure:

PEAK[:BASic]:RANGe<x>

Function Sets the measurement range of the peak value of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
RANGe<x> {<NRf>,<NRf>}
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
RANGe<x>?
<x> of FFT<x> = 1 or 2
<x> of RANGe<x> = 1 or 2
<NRf> = -5 to 5 div

Example :ANALYSIS:FFT1:MEASURE:PEAK:BASIC:
RANGE1 0,1
:ANALYSIS:FFT1:MEASURE:PEAK:BASIC:
RANGE1? -> :ANALYSIS:FFT1:MEASURE:
PEAK:BASIC:RANGE1 1.000E+00,0.000E+00

:ANALysis:FFT<x>:MEASure:

PEAK[:BASic]:V<x>?

Function Queries all settings related to the peak value of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
V<x>?
<x> of FFT<x> = 1 or 2
<x> of V<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:

PEAK[:BASic]:V<x>:STATe

Function Turns ON/OFF the peak value of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
V<x>:STATe {<Boolean>}
:ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
V<x>:STATe?
<x> of FFT<x> = 1 or 2
<x> of V<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:PEAK:BASIC:V1:
STATE ON
:ANALYSIS:FFT1:MEASURE:PEAK:BASIC:V1:
STATE? -> :ANALYSIS:FFT1:MEASURE:PEAK:
BASIC:V1:STATE 1

:ANALysis:FFT<x>:MEASure:

PEAK[:BASic]:V<x>:VALue?

Function Queries the peak value of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK[:BASic]:
V<x>:VALue?
<x> of FFT<x> = 1 or 2
<x> of V<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:PEAK:BASIC:V1:
VALUE? -> :ANALYSIS:FFT1:MEASURE:PEAK:
BASIC:V1:VALUE 1.000E+00

:ANALysis:FFT<x>:MEASure:PEAK:

CALCulation?

Function Queries all settings related to calculation items of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK:
CALCulation?
<x> = 1 or 2

:ANALysis:FFT<x>:MEASure:PEAK:

CALCulation:ALL

Function Turns ON/OFF all calculation items of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK:
CALCulation:ALL {<Boolean>}
<x> = 1 or 2

Example :ANALYSIS:FFT1:MEASURE:PEAK:
CALCULATION:ALL ON

:ANALysis:FFT<x>:MEASure:PEAK:

CALCulation:DEFine<x>

Function Sets the equation of the calculation item of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:PEAK:
CALCulation:DEFine<x> {<String>}
:ANALysis:FFT<x>:MEASure:PEAK:
CALCulation:DEFine<x>?
<x> of FFT<x> = 1 or 2
<x> of DEFine<x> = 1 to 4
<String> = Up to 128 characters

Example :ANALYSIS:FFT1:MEASURE:PEAK:
CALCULATION:DEFINE1 "V(P1)"
:ANALYSIS:FFT1:MEASURE:PEAK:
CALCULATION:DEFINE1? -> :ANALYSIS:FFT1:
MEASURE:PEAK:CALCULATION:
DEFINE1 "V(P1)"

:ANALysis:FFT<x>:MEASure:PEAK:CALCulation:STATe<x>

Function Turns ON/OFF the calculation items of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:MEASure:PEAK:CALCulation:STATe<x> {<Boolean>}
:ANALysis:FFT<x>:MEASure:PEAK:CALCulation:STATe<x>?
<x> of FFT<x> = 1 or 2
<x> of STATe<x> = 1 to 4

Example :ANALYSIS:FFT1:MEASURE:PEAK:CALCULATION:STATE1 ON
:ANALYSIS:FFT1:MEASURE:PEAK:CALCULATION:STATE1? -> :ANALYSIS:FFT1:MEASURE:PEAK:CALCULATION:STATE1 1

:ANALysis:FFT<x>:MEASure:PEAK:CALCulation:VALue<x>?

Function Queries the measured value of the calculation item of the FFT computation.

Syntax :ANALysis:FFT<x>:MEASure:PEAK:CALCulation:VALue<x>?
<x> of FFT<x> = 1 or 2
<x> of VALue<x> = 1 to 4

Example :ANALYSIS:FFT1:MEASURE:PEAK:CALCULATION:VALUE1? -> :ANALYSIS:FFT1:MEASURE:PEAK:CALCULATION:VALUE1 1.000E+00

:ANALysis:FFT<x>:MODE

Function Sets or queries the waveform display mode for FFT analysis.

Syntax :ANALysis:FFT<x>:MODE {AVERage|MAXHold|NORMal}
:ANALysis:FFT<x>:MODE?
<x> = 1 or 2

Example :ANALYSIS:FFT1:MODE AVERAGE
:ANALYSIS:FFT1:MODE? -> :ANALYSIS:FFT1:MODE AVERAGE

:ANALysis:FFT<x>:RANGe

Function Sets the measurement source window used in the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:RANGe {MAIN|Z1|Z2}
:ANALysis:FFT<x>:RANGe?
<x> = 1 or 2

Example :ANALYSIS:FFT1:RANGE MAIN
:ANALYSIS:FFT1:RANGE? -> :ANALYSIS:FFT1:RANGE MAIN

:ANALysis:FFT<x>:RPOSition (Ref Position)

Function Sets the center point of magnification of the vertical axis of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:RPOSition {<NRf>}
:ANALysis:FFT<x>:RPOSition?
<x> = 1 or 2
<NRf> = -4 to 4 (div)

Example :ANALYSIS:FFT1:RPOSITION 1
:ANALYSIS:FFT1:RPOSITION? -> :ANALYSIS:FFT1:RPOSITION 1.000E+00

:ANALysis::FFT<x>:TRACe

Function Sets or queries the source waveform for FFT analysis.

Syntax :ANALysis::FFT<x>:TRACe {<NRf>}
:ANALysis::FFT<x>:TRACe?
<x> = 1 or 2
<NRf> = 1 to 8

Example :ANALYSIS::FFT1:TRACE 1
:ANALYSIS::FFT1:TRACE? -> :ANALYSIS::FFT1:TRACE 1

:ANALysis::FFT<x>:TYPE

Function Sets or queries the spectrum for FFT analysis.

Syntax :ANALysis::FFT<x>:TYPE {CH_MAG,<NRf>|CS_IMAG,<NRf>|CS_LOGMAG,<NRf>|CS_MAG,<NRf>|CS_PHASE,<NRf>|CS_REAL,<NRf>|LS_IMAG|LS_LOGMAG|LS_MAG|LS_PHASE|LS_REAL|PS_LOGMAG|PS_MAG|PSD_LOGMAG|PSD_MAG|RS_LOGMAG|RS_MAG|TF_IMAG,<NRf>|TF_LOGMAG,<NRf>|TF_MAG,<NRf>|TF_PHASE,<NRf>|TF_REAL,<NRf>}
:ANALysis::FFT<x>:TYPE?
<x> = 1 or 2
<NRf> = 1 to 8

Example :ANALYSIS::FFT1:TYPE CH_MAG,1
:ANALYSIS::FFT1:TYPE? -> :ANALYSIS:FFT1:TYPE CH_MAG,1

Description This command results in an error on models that are not equipped with the user-defined computation option.

- When the spectrum is set to (CH_MAG|CS_IMAG|CS_LOGMAG|CS_MAG|CS_PHASE|CS_REAL|TF_IMAG|TF_LOGMAG|TF_MAG|TF_PHASE|TF_REAL), use <NRf> to select the second waveform under analysis.

5.3 ANALysis Group

:ANALysis:FFT<x>:VERTical?

Function Queries all settings related the vertical axis of the FFT computation.

Syntax :ANALysis:FFT<x>:VERTical?
<x> = 1 or 2

Example :ANALYSIS:FFT1:VERTICAL? -> :ANALYSIS:
FFT1:VERTICAL:
LEVEL 1.000E+00;MODE AUTO;
SENSITIVITY 1.000E+00

:ANALysis:FFT<x>:VERTical:LEVel

Function Sets the display position of the vertical axis of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:VERTical:LEVel {<NRf>}
:ANALysis:FFT<x>:VERTical:LEVel?
<x> = 1 or 2

<NRf> = -1.000E+31 to 1.000E+31 (dBV)

Example :ANALYSIS:FFT1:VERTICAL:LEVEL 1
:ANALYSIS:FFT1:VERTICAL:LEVEL?
-> :ANALYSIS:FFT1:VERTICAL:
LEVEL 1.000E+00

:ANALysis:FFT<x>:VERTical:MODE

Function Sets the vertical axis mode of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:VERTical:MODE {AUTO|
MANual}
:ANALysis:FFT<x>:VERTical:MODE?
<x> = 1 or 2

Example :ANALYSIS:FFT1:VERTICAL:MODE AUTO
:ANALYSIS:FFT1:VERTICAL:MODE?
-> :ANALYSIS:FFT1:VERTICAL:MODE AUTO

:ANALysis:FFT<x>:VERTical:

SENSitivity

Function Sets the vertical sensitivity of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:VERTical:SENSitivity
{<NRf>}
:ANALysis:FFT<x>:VERTical:SENSitivity?
<x> = 1 or 2

<NRf> = 0 to 1.000E+31 (dBV)

Example :ANALYSIS:FFT1:VERTICAL:SENSITIVITY 1
:ANALYSIS:FFT1:VERTICAL:SENSITIVITY?
-> :ANALYSIS:FFT1:VERTICAL:S
ENSITIVITY 1.000E+00

:ANALysis:FFT<x>:WINDow

Function Sets the window function of the FFT computation or queries the current setting.

Syntax :ANALysis:FFT<x>:WINDow {FLATtop|
HANNing|RECTangle}
:ANALysis:FFT<x>:WINDow?
<x> = 1 or 2

Example :ANALYSIS:FFT1:WINDOW FLATTOP
:ANALYSIS:FFT1:WINDOW? -> :ANALYSIS:
FFT1:WINDOW FLATTOP

:ANALysis:TYPE<x>

Function Sets the analysis function type or queries the current setting.

Syntax :ANALysis:TYPE<x> {AHISTogram|FFT|
WPARAMeter|XY|OFF}
:ANALysis:TYPE<x>?
<x> = 1 or 2

Example :ANALYSIS:TYPE1 AHISTOGRAM
:ANALYSIS:TYPE1? -> :ANALYSIS:
TYPE1 AHISTOGRAM

:ANALysis:VTDisplay

Function Turns ON/OFF the VT waveform display or queries the current setting.

Syntax :ANALysis:VTDisplay {<Boolean>}
:ANALysis:VTDisplay?

Example :ANALYSIS:VTDISPLAY ON
:ANALYSIS:VTDISPLAY? -> :ANALYSIS:
VTDISPLAY 1

:ANALysis:WAIT<x>?

Function Waits for the completion of the automated measurement with a timeout option.

Syntax :ANALysis:WAIT<x>? {<NRf>}
<x> = 1 or 2
<NRf> = 1 to 360000 (timeout value, in units of 10 ms)

Example :ANALYSIS:WAIT1? 100 ->:ANALYSIS:WAIT1 1
Description If the execution of the automated measurement completes within the timeout value, 0 is returned; if it is not complete or automated measurement is not being executed, 1 is returned. Even if the timeout value is set long, 0 is returned when the execution of the automated measurement is complete.

:ANALysis:WPARAMeter<x>?

Function Queries all settings related to the waveform parameter measurement function.

Syntax :ANALysis:WPARAMeter<x>?
<x> = 1 or 2

I

:ANALysis:WPARAMeter<x>:BIT<x>?

Function Queries all settings related to each logic bit of logic waveform parameter measurement.

Syntax : ANALysis:WPARAMeter<x>:BIT<x>?
 <x> of WPARAMeter<x> = 1 or 2
 <x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)

:ANALysis:WPARAMeter<x>:BIT<x>:AREA<x>?

Function Queries all settings related to each area of logic waveform parameter measurement.

Syntax : ANALysis:WPARAMeter<x>:BIT<x>:AREA<x>?
 AREA<x>?
 <x> of WPARAMeter<x> = 1 or 2
 <x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
 <x> of AREA<x> = 1 or 2

:ANALysis:WPARAMeter<x>:BIT<x>:AREA<x>:TYPE

Function Sets the logic waveform parameters for logic waveform parameter measurement or queries the current setting.

Syntax : ANALysis:WPARAMeter<x>:BIT<x>:AREA<x>:TYPE {AVGPeriod|DElay|DT|DUTYcycle|ENUMber|FREquency|NWIDth|PERiod|PWIDth}
 : ANALysis:WPARAMeter<x>:BIT<x>:AREA<x>:TYPE?
 <x> of WPARAMeter<x> = 1 or 2
 <x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
 <x> of AREA<x> = 1 or 2

Example : ANALYSIS:WPARAMETER1:BIT1:AREA1:TYPE PERIOD
 : ANALYSIS:WPARAMETER1:BIT1:AREA1:TYPE?
 -> : ANALYSIS:WPARAMETER1:BIT1:AREA1:TYPE PERIOD

:ANALysis:WPARAMeter<x>:CALCulation

Function Sets the calculation items of the automated measurement of waveform parameters or queries the current setting.

Syntax : ANALysis:WPARAMeter<x>:CALCulation {<NRf>}
 : ANALysis:WPARAMeter<x>:CALCulation?
 <x> = 1 or 2
 <NRf> = 1 to 4

Example : ANALYSIS:WPARAMETER1:CALCULATION 1
 : ANALYSIS:WPARAMETER1:CALCULATION?
 -> : ANALYSIS:WPARAMETER1:CALCULATION 1

:ANALysis:WPARAMeter<x>:HISTogram?

Function Queries all settings related to the histogram display of the waveform parameter measurement.

Syntax : ANALysis:WPARAMeter<x>:HISTogram?
 <x> = 1 or 2

:ANALysis:WPARAMeter<x>:HISTogram:MEASure?

Function Queries all settings related to the automated measurement of the histogram display of the waveform parameter measurement.

Syntax : ANALysis:WPARAMeter<x>:HISTogram:MEASure?
 <x> = 1 or 2

:ANALysis:WPARAMeter<x>:HISTogram:MEASure:CUSor?

Function Queries all settings related to the cursor measurement on the histogram of the waveform parameter measurement.

Syntax : ANALysis:WPARAMeter<x>:HISTogram:MEASure:CUSor?
 <x> = 1 or 2

:ANALysis:WPARAMeter<x>:HISTogram:MEASure:CUSor:ALL

Function Turns ON/OFF all histogram cursors of waveform parameter measurement.

Syntax : ANALysis:WPARAMeter<x>:HISTogram:MEASure:CUSor:ALL {<Boolean>}
 <x> = 1 or 2

Example : ANALYSIS:WPARAMETER1:HISTOGRAM:MEASURE:CUSOR:ALL ON

:ANALysis:WPARAMeter<x>:HISTogram:MEASure:CUSor:C<x>?

Function Queries all settings related to the cursor measurement on the histogram of the waveform parameter measurement.

Syntax : ANALysis:WPARAMeter<x>:HISTogram:MEASure:CUSor:C<x>?
 <x> of WPARAMeter<x> = 1 or 2
 <x> of C<x> = 1 or 2

5.3 ANALysis Group

:ANALysis:WPARAMeter<x>:HISTogram: MEASure:CURSor:C<x>:POSition

Function Sets the cursor position on the trend of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:C<x>:POSition {<NRf>}
:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:C<x>:POSition?
<x> of WPARAMeter<x> = 1 or 2
<x> of C<x> = 1 or 2
<NRf> = -5 to 5 (div)

Example :ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:Cursors:C1:POSITION ON
:ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:Cursors:C1:POSITION?
-> :ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:Cursors:C1:POSITION 1.000E+00

:ANALysis:WPARAMeter<x>:HISTogram: MEASure:CURSor:C<x>:STATe

Function Turns ON/OFF the cursor on the histogram of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:C<x>:
STATe {<Boolean>}
:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:C<x>:STATe?
<x> of WPARAMeter<x> = 1 or 2
<x> of C<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:Cursors:C1:STATE ON
:ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:Cursors:C1:STATE? -> :ANALYSIS:
WPARAMETER1:HISTOGRAM:MEASURE:Cursors:
C1:STATE 1

:ANALysis:WPARAMeter<x>:HISTogram: MEASure:CURSor:C<x>:VALue?

Function Queries the measured value of the cursor on the histogram of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:CURSor:C<x>:VALue?
<x> of WPARAMeter<x> = 1 or 2
<x> of C<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:Cursors:C1:VALUE? -> :ANALYSIS:
WPARAMETER1:HISTOGRAM:MEASURE:Cursors:
C1:VALUE 1.000E+00

:ANALysis:WPARAMeter<x>:HISTogram: MEASure:CURSor:DC?

Function Queries all settings related to the measurement between cursors on the histogram of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:CURSor:DC?
<x> = 1 or 2

:ANALysis:WPARAMeter<x>:HISTogram: MEASure:CURSor:DC:STATe

Function Turns ON/OFF the measurement between cursors on the histogram of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:DC:STATe {<Boolean>}
:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:DC:STATe?
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:Cursors:DC:STATE ON
:ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:Cursors:DC:STATE? -> :ANALYSIS:
WPARAMETER1:HISTOGRAM:MEASURE:Cursors:
DC:STATE 1

:ANALysis:WPARAMeter<x>:HISTogram: MEASure:CURSor:DC:VALue?

Function Queries the measured value between cursors on the histogram of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:CURSor:DC:VALue?
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:Cursors:DC:VALUE? -> :ANALYSIS:
WPARAMETER1:HISTOGRAM:MEASURE:Cursors:
DC:VALUE 1.000E+00

:ANALysis:WPARAMeter<x>:HISTogram: MEASure:CURSor:LINKage

Function Turns ON/OFF the histogram cursor link of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:CURSor:LINKage {<Boolean>}
:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:CURSor:LINKage?
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:Cursors:LINKAGE ON
:ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:Cursors:LINKAGE? -> :ANALYSIS:
WPARAMETER1:HISTOGRAM:MEASURE:Cursors:
LINKAGE 1

**:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:MODE**

Function Sets the automated measurement mode of the histogram display of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:MODE {CURSor|OFF|PARAMeter}
:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:MODE?
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:MODE CURSOR
:ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:MODE? -> :ANALYSIS:WPARAMETER1:
HISTOGRAM:MEASURE:MODE CURSOR

**:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter?**

Function Queries all settings related to the automated measurement of histogram parameters of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter?
<x> = 1 or 2

**:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:ALL**

Function Turn ON/OFF all histogram parameters of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:ALL {<Boolean>}
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:PARAMETER:ALL ON

**:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:<Parameter>?**

Function Queries all settings related to the histogram parameter of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:<Parameter>?
<x> = 1 or 2
<Parameter> = {MEAN|PEAK|SD3integ|
SDEViation|SDInteg}

**:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:<Parameter>:STATE**

Function Turns ON/OFF the histogram parameter of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:<Parameter>:STATE
{<Boolean>}
:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:<Parameter>:STATE?
<x> = 1 or 2

<Parameter> = {MEAN|PEAK|SD3integ|
SDEViation|SDInteg}

Example (The following is an example for the average value.)
:ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:PARAMETER:MEAN:STATE ON
:ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:PARAMETER:MEAN:STATE?
-> :ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:PARAMETER:MEAN:STATE 1

**:ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:<Parameter>:VALUE?**

Function Queries the measured value of the histogram parameter of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:HISTogram:
MEASure:PARAMeter:<Parameter>:VALUE?
<x> = 1 or 2
<Parameter> = {MEAN|PEAK|SD3integ|
SDEViation|SDInteg}

Example (The following is an example for the average value.)
:ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:PARAMETER:MEAN:VALUE?
-> :ANALYSIS:WPARAMETER1:HISTOGRAM:
MEASURE:PARAMETER:MEAN:VALUE 1.000E+00

:ANALysis:WPARAMeter<x>:LIST?

Function Queries all settings related to the list display of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:LIST?
<x> = 1 or 2

:ANALysis:WPARAMeter<x>:LIST:ITEM?

Function Queries list display items of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:LIST:ITEM?
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:LIST:ITEM?
-> :ANALYSIS:WPARAMETER1:LIST:
ITEM "LOW(C1)"

5.3 ANALysis Group

:ANALysis:WPARAMeter<x>:LIST:MODE

Function Sets the list display mode of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:LIST:
MODE {STATistic|TREND}
:ANALysis:WPARAMeter<x>:LIST:MODE?
<x>=1 or 2

Example :ANALYSIS:WPARAMETER1:LIST:MODE
STATISTIC
:ANALYSIS:WPARAMETER1:LIST:MODE?
-> : ANALYSIS:WPARAMETER1:LIST:
MODE STATISTIC

:ANALysis:WPARAMeter<x>:LIST:SCROLL

Function Sets the scroll direction of the list display of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:LIST:SCROLL
{HORIZONTAL|VERTICAL}
:ANALysis:WPARAMeter<x>:LIST:SCROLL?
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:LIST:
SCROLL HORIZONTAL
:ANALYSIS:WPARAMETER1:LIST:SCROLL?
-> :ANALYSIS:WPARAMETER1:LIST:
SCROLL HORIZONTAL

:ANALysis:WPARAMeter<x>:LIST:VALUE?

Function Queries the automated measured value of the list display number of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:LIST:
VALUE? {<NRf>|MAXimum}
<x> = 1 or 2
<NRf> = 1 to 100000

Example :ANALYSIS:WPARAMETER1:LIST:VALUE? 1
-> :ANALYSIS:WPARAMETER1:LIST:
VALUE 1,1.000E+00

Description • If the measurement is not possible, "NAN (Not A Number)" is returned.
• If the value of the list display number is not present, "NAN (Not A Number)" is returned.
• If MAXimum is specified, the maximum list display number is selected.

:ANALysis:WPARAMeter<x>:MODE

Function Sets the mode of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:MODE
{HISTOgram|LIST|TREND}
:ANALysis:WPARAMeter<x>:MODE?
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:MODE HISTOGRAM
:ANALYSIS:WPARAMETER1:MODE?
-> :ANALYSIS:WPARAMETER1:MODE HISTOGRAM

:ANALysis:WPARAMeter<x>:TRACE<x>?

Function Queries all settings related to the trace of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:TRACE<x>?
<x> of WPARAMeter<x> = 1 or 2
<x> of TRACE<x> = 1 to 8

:ANALysis:WPARAMeter<x>:TRACE<x>:AREA<x>?

Function Queries all settings related to the area of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:TRACE<x>:
AREA<x>?
<x> of WPARAMeter<x> = 1 or 2
<x> of TRACE<x> = 1 to 8
<x> of AREA<x> = 1 or 2

:ANALysis:WPARAMeter<x>:TRACE<x>:AREA<x>:TYPE

Function Sets the waveform parameter of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:TRACE<x>:
AREA<x>:TYPE {<Parameter>}
:ANALysis:WPARAMeter<x>:TRACE<x>:
AREA<x>:TYPE?
<x> of WPARAMeter<x> = 1 or 2
<x> of TRACE<x> = 1 to 8
<x> of AREA<x> = 1 or 2
<Parameter> = {AVGPeriod|BURSt|CMean|CRMS|
CSDeviation|DElay|DT|DUTYcycle|ENUMber|FALL|
FREQuency|HIGH|HILow|LOW|MAXimum|MEAN|
MINimum|NOVershoot|NWIDth|PERiod|POVershoot|
PTOPeak|PWIDth|RISE|RMS|SDEviation|TYCInteg|
TYINteg|V1|V2}

Example :ANALYSIS:WPARAMETER1:TRACE1:AREA1:
TYPE BURST
:ANALYSIS:WPARAMETER1:TRACE1:AREA1:
TYPE? -> :ANALYSIS:WPARAMETER1:TRACE1:
AREA1:TYPE BURST

:ANALysis:WPARAMeter<x>:TREND?

Function Queries all settings related to the trend display of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:TREND?
<x> = 1 or 2

:ANALysis:WPARAMeter<x>:TREND:**AScale[:EXECute]**

Function Executes the auto scaling of the trend display of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:TREND:
AScale[:EXECute]
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:TREND:ASCALE:
EXECUTE

:ANALysis:WPARAMeter<x>:TREND:HRANGE

Function Sets the target window for trend display of measured waveform parameters or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:TREND:
HRANGE {MAIN|Z1|Z2}
:ANALysis:WPARAMeter<x>:TREND:HRANGE?
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:TREND:HRANGE MAIN
:ANALYSIS:WPARAMETER1:TREND:HRANGE? ->
:ANALYSIS:WPARAMETER1:TREND:HRANGE MAIN

:ANALysis:WPARAMeter<x>:TREND:HSPAN

Function Sets the horizontal span of the trend display of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:TREND:HSPAN
{<NRF>}
:ANALysis:WPARAMeter<x>:TREND:HSPAN?
<x> = 1 or 2
<NRF> = 1 to 100000

Example :ANALYSIS:WPARAMETER1:TREND:HSPAN 1
:ANALYSIS:WPARAMETER1:TREND:HSPAN?
-> :ANALYSIS:WPARAMETER1:TREND:HSPAN 1

:ANALysis:WPARAMeter<x>:TREND:**MEASure?**

Function Queries all settings related to the automated measurement of the trend display of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure?
<x> = 1 or 2

:ANALysis:WPARAMeter<x>:TREND:**MEASure:CUSor?**

Function Queries all settings related to the cursor measurement of the trend of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure:
CUSor?
<x> = 1 or 2

:ANALysis:WPARAMeter<x>:TREND:**MEASure:CUSor:ALL**

Function Turns ON/OFF all cursors of the trend of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure:
CUSor:ALL {<Boolean>}
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:TREND:MEASURE:
CURSOR:ALL ON

:ANALysis:WPARAMeter<x>:TREND:**MEASure:CUSor:C<x>?**

Function Queries all settings related to the measured value of the cursor of the trend of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure:
CUSor:C<x>?
<x> of WPARAMeter<x> = 1 or 2
<x> of C<x> = 1 or 2

:ANALysis:WPARAMeter<x>:TREND:**MEASure:CUSor:C<x>:POSITION**

Function Sets the cursor position of the trend of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure:
CUSor:C<x>:POSITION {<NRF>}
:ANALysis:WPARAMeter<x>:TREND:MEASure:
CUSor:C<x>:POSITION?
<x> of WPARAMeter<x> = 1 or 2
<x> of C<x> = 1 or 2
<NRF> = -5 to 5 div

Example :ANALYSIS:WPARAMETER1:TREND:MEASURE:
CURSOR:C1:POSITION 1
:ANALYSIS:WPARAMETER1:TREND:MEASURE:
CURSOR:C1:POSITION? -> :ANALYSIS:
WPARAMETER1:TREND:MEASURE:
CURSOR:C1:POSITION 1.000E+00
CURSOR:C1:STATE? -> :ANALYSIS:
WPARAMETER1:TREND:MEASURE:
CURSOR:C1:STATE 1

5.3 ANALysis Group

:ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:C<x>:STATE

Function Turns ON/OFF the cursor of the trend of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:C<x>:STATE {<Boolean>}
:ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:C<x>:STATE?
<x> of WPARAMeter<x> = 1 or 2
<x> of C<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:TREND:MEASURE:
CURSOR:C1:STATE ON
:ANALYSIS:WPARAMETER1:TREND:MEASURE:
CURSOR:C1:STATE? -> :ANALYSIS:
WPARAMETER1:TREND:MEASURE:
CURSOR:C1:STATE 1

:ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:C<x>:VALUE?

Function Queries the measured value of the cursor of the trend of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:C<x>:VALUE?
<x> of WPARAMeter<x> = 1 or 2
<x> of C<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:TREND:MEASURE:
CURSOR:C1:VALUE? -> :ANALYSIS:
WPARAMETER1:TREND:MEASURE:
CURSOR:C1:VALUE 1.000E+00

:ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:DC?

Function Queries all settings related to the measurement between cursors on the trend of the waveform parameter measurement.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:DC?
<x> of WPARAMeter<x> = 1 or 2

:ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:DC:STATE

Function Turns ON/OFF the measurement between cursors on the trend of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:DC:STATE {<Boolean>}
:ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:DC:STATE?
<x> of WPARAMeter<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:TREND:MEASURE:
CURSOR:DC:STATE ON
:ANALYSIS:WPARAMETER1:TREND:MEASURE:
CURSOR:DC:STATE? -> :ANALYSIS:
WPARAMETER1:TREND:MEASURE:CURSOR:DC:
STATE 1

:ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:DC:VALUE?

Function Sets the measured value between cursors on the trend of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:DC:VALUE?
<x> of WPARAMeter<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:TREND:MEASURE:
CURSOR:DC:VALUE? -> :ANALYSIS:
WPARAMETER1:TREND:MEASURE:CURSOR:DC:
VALUE 1.000E+00

:ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:LINKage

Function Turns ON/OFF the trend cursor link of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:LINKage {<Boolean>}
:ANALysis:WPARAMeter<x>:TREND:MEASure:CURSor:LINKage?
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:TREND:MEASURE:
CURSOR:LINKAGE ON
:ANALYSIS:WPARAMETER1:TREND:MEASURE:
CURSOR:LINKAGE? -> :ANALYSIS:
WPARAMETER1:TREND:MEASURE:CURSOR:
LINKAGE 1

:ANALysis:WPARAMeter<x>:TREND:MEASure:MODE

Function Sets the automated measurement mode of the trend of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:TREND:MEASure:MODE {CURSor|OFF}
:ANALysis:WPARAMeter<x>:TREND:MEASure:MODE?
<x> = 1 or 2

Example :ANALYSIS:WPARAMETER1:TREND:MEASURE:
MODE CURSOR
:ANALYSIS:WPARAMETER1:TREND:MEASURE:
MODE? -> :ANALYSIS:WPARAMETER1:TREND:
MEASURE:MODE CURSOR

:ANALysis:WPARAMeter<x>:TREND:VERTical

Function Sets the vertical range of the trend of the waveform parameter measurement or queries the current setting.

Syntax :ANALysis:WPARAMeter<x>:TREND:VERTical {<NRf>,<NRf>}
:ANALysis:WPARAMeter<x>:TREND:VERTical? <x> = 1 or 2
<NRf> = -1.000E+31 to 1.000E+31 (div)

Example :ANALYSIS:WPARAMETER1:TREND:VERTICAL 1,2
:ANALYSIS:WPARAMETER1:TREND:VERTICAL?
-> :ANALYSIS:WPARAMETER1:TREND:VERTICAL 2.000E+00,1.000E+00

:ANALysis:XY<x>?

Function Queries all settings related to the XY display function.

Syntax :ANALysis:XY<x>?
<x> = 1 or 2

:ANALysis:XY<x>:GATE?

Function Queries all settings related to the gate function of the XY display.

Syntax :ANALysis:XY<x>:GATE?
<x> = 1 or 2

:ANALysis:XY<x>:GATE:ALEvel

Function Sets the active level of the gate of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:GATE:ALEvel {HIGH|LOW}
:ANALysis:XY<x>:GATE:ALEvel? <x> = 1 or 2

Example :ANALYSIS:XY1:GATE:ALEVEL HIGH
:ANALYSIS:XY1:GATE:ALEVEL?
-> :ANALYSIS:XY1:GATE:ALEVEL HIGH

:ANALysis:XY<x>:GATE:HYSTEResis<x>

Function Sets the hysteresis of the gate of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:GATE:HYSTEResis<x> {<NRf>}
:ANALysis:XY<x>:GATE:HYSTEResis<x>? <x> of XY<x> = 1 or 2
<x> of HYSTEResis<x> = 1 to 8
<NRf> = 0 to 4 (div)

Example :ANALYSIS:XY1:GATE:HYSTERESIS1 1
:ANALYSIS:XY1:GATE:HYSTERESIS1?
-> :ANALYSIS:XY1:GATE:HYSTERESIS1 1.000E+00

:ANALysis:XY<x>:GATE:LEVel<x>

Function Sets the level of the gate of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:GATE:LEVel<x> {<NRf>,<Voltage>,<Current>}
:ANALysis:XY<x>:GATE:LEVel<x>? <x> of XY<x> = 1 or 2
<x> of LEVel<x> = 1 to 8
<NRf>,<Voltage>, and <Current> = See the DL6000/DLM6000 User's Manual.

Example :ANALYSIS:XY1:GATE:LEVEL1 1
:ANALYSIS:XY1:GATE:LEVEL1?
-> :ANALYSIS:XY1:GATE:LEVEL1 1.000E+00

:ANALysis:XY<x>:GATE:TRACe

Function Sets the gate trace of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:GATE:TRACe {<NRf>|OFF}
:ANALysis:XY<x>:GATE:TRACe? <x> = 1 or 2
<NRf> = 1 to 8

Example :ANALYSIS:XY1:GATE:TRACE 1
:ANALYSIS:XY1:GATE:TRACE? -> :ANALYSIS:XY1:GATE:TRACE 1

:ANALysis:XY<x>:MEASure?

Function Queries all settings related to the automated measurement of the XY display.

Syntax :ANALysis:XY<x>:MEASure?
<x> = 1 or 2

:ANALysis:XY<x>:MEASure:CURSor?

Function Queries all settings related to the cursor measurement of the XY display.

Syntax :ANALysis:XY<x>:MEASure:CURSor? <x> = 1 or 2

:ANALysis:XY<x>:MEASure:CURSor:XLINKage

Function Turns ON/OFF the ΔV cursor link on the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:MEASure:CURSor:XLINKage {<Boolean>}
:ANALysis:XY<x>:MEASure:CURSor:XLINKage? <x> = 1 or 2

Example :ANALYSIS:XY1:MEASURE:Cursors:XLINKAGE ON
:ANALYSIS:XY1:MEASURE:Cursors:XLINKAGE?
-> :ANALYSIS:XY1:MEASURE:Cursors:XLINKAGE 1

5.3 ANALysis Group

:ANALysis:XY<x>:MEASure:CURSor:X<x>?

Function Queries all settings related to the ΔV cursor of the XY display.

Syntax :ANALysis:XY<x>:MEASure:CURSor:X<x>?
<x> of XY<x> = 1 or 2
<x> of X<x> = 1 or 2

:ANALysis:XY<x>:MEASure:CURSor:X<x>:POSition

Function Sets the ΔV cursor position of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:MEASure:CURSor:X<x>:
POSition {<NRf>}
:ANALysis:XY<x>:MEASure:CURSor:X<x>:
POSition?
<x> of XY<x> = 1 or 2
<x> of X<x> = 1 or 2
<NRf> = -4 to 4 (div)

Example :ANALYSIS:XY1:MEASURE:CURSOR:X1:
POSITION 1
:ANALYSIS:XY1:MEASURE:CURSOR:X1:
POSITION?
-> :ANALYSIS:XY1:MEASURE:CURSOR:X1:
POSITION 1.000E+00

:ANALysis:XY<x>:MEASure:CURSor:X<x>:VALue?

Function Queries the voltage value at the ΔV cursor of the XY display.

Syntax :ANALysis:XY<x>:MEASure:CURSor:X<x>:
VALue?
<x> of XY<x> = 1 or 2
<x> of X<x> = 1 or 2

Example :ANALYSIS:XY1:MEASURE:CURSOR:X1:VALUE?
-> :ANALYSIS:XY1:MEASURE:CURSOR:X1:
VALUE 1.000E+00

:ANALysis:XY<x>:MEASure:CURSor:YLINKage

Function Turns ON/OFF the ΔT cursor link on the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:MEASure:CURSor:
YLINKage {<Boolean>}
:ANALysis:XY<x>:MEASure:CURSor:
YLINKage?
<x> = 1 or 2

Example :ANALYSIS:XY1:MEASURE:CURSOR:
YLINKAGE ON
:ANALYSIS:XY1:MEASURE:CURSOR:YLINKAGE?
-> :ANALYSIS:XY1:MEASURE:CURSOR:
YLINKAGE 1

:ANALysis:XY<x>:MEASure:CURSor:Y<x>?

Function Queries all settings related to the ΔT cursor of the XY display.

Syntax :ANALysis:XY<x>:MEASure:CURSor:Y<x>?
<x> of XY<x> = 1 or 2
<x> of Y<x> = 1 or 2

:ANALysis:XY<x>:MEASure:CURSor:Y<x>:POSition

Function Sets the ΔT cursor position of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:MEASure:CURSor:Y<x>:
POSition {<NRf>}
:ANALysis:XY<x>:MEASure:CURSor:Y<x>:
POSition?
<x> of XY<x> = 1 or 2
<x> of Y<x> = 1 or 2
<NRf> = -4 to 4 (div)

Example :ANALYSIS:XY1:MEASURE:CURSOR:Y1:
POSITION 1
:ANALYSIS:XY1:MEASURE:CURSOR:Y1:
POSITION? -> :ANALYSIS:XY1:MEASURE:
CURSOR:Y1:POSITION 1.000E+00

:ANALysis:XY<x>:MEASure:CURSor:Y<x>:VALue?

Function Queries the voltage value at the ΔT cursor of the XY display.

Syntax :ANALysis:XY<x>:MEASure:CURSor:Y<x>:
VALue?
<x> of XY<x> = 1 or 2
<x> of Y<x> = 1 or 2

Example :ANALYSIS:XY1:MEASURE:CURSOR:Y1:VALUE?
-> :ANALYSIS:XY1:MEASURE:CURSOR:Y1:
VALUE 1.000E+00

:ANALysis:XY<x>:MEASure:MODE

Function Sets the automated measurement mode of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:MEASure:MODE {CURSor|
OFF|XYINtegr}
:ANALysis:XY<x>:MEASure:MODE?
<x> = 1 or 2

Example :ANALYSIS:XY1:MEASURE:MODE CURSOR
:ANALYSIS:XY1:MEASURE:MODE?
-> :ANALYSIS:XY1:MEASURE:MODE CURSOR

:ANALysis:XY<x>:MEASure:XYINtegr?

Function Queries all settings related to the integration of the XY display.

Syntax :ANALysis:XY<x>:MEASure:XYINtegr?
<x> = 1 or 2

:ANALysis:XY<x>:MEASure:XYINteg:LOOP

Function Sets the integration mode of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:MEASure:XYINteg:LOOP
{CLOSE|OPEN}
:ANALysis:XY<x>:MEASure:XYINteg:LOOP?
<x> = 1 or 2

Example :ANALYSIS:XY1:MEASURE:XYINTEG:
LOOP CLOSE
:ANALYSIS:XY1:MEASURE:XYINTEG:LOOP?
-> :ANALYSIS:XY1:MEASURE:XYINTEG:
LOOP CLOSE

:ANALysis:XY<x>:MEASure:XYINteg:POLarity

Function Sets the integration polarity of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:MEASure:XYINteg:
POLarity {CCW|CW}
:ANALysis:XY<x>:MEASure:XYINteg:
POLarity?
<x> = 1 or 2

Example :ANALYSIS:XY1:MEASURE:XYINTEG:
POLARITY CCW
:ANALYSIS:XY1:MEASURE:XYINTEG:POLARITY?
-> :ANALYSIS:XY1:MEASURE:XYINTEG:
POLARITY CCW

:ANALysis:XY<x>:MEASure:XYINteg:VALue?

Function Queries the integral value of the XY display.

Syntax :ANALysis:XY<x>:MEASure:XYINteg:VALue?
<x> = 1 or 2

Example :ANALYSIS:XY1:MEASURE:XYINTEG:VALUE?
-> :ANALYSIS:XY1:MEASURE:XYINTEG:
VALUE 1.000E+00

:ANALysis:XY<x>:TRANge (Time Range)

Function Sets the measurement range of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:TRANge {<NRf>,<NRf>}
:ANALysis:XY<x>:TRANge?
<x> = 1 or 2
<NRf> = -5 to 5 div

:ANALysis:XY<x>:WINDow

Function Sets the measurement source window of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:WINDow {MAIN|Z1|Z2}
:ANALysis:XY<x>:WINDow?
<x> = 1 or 2

Example :ANALYSIS:XY1:WINDOW MAIN
:ANALYSIS:XY1:WINDOW? -> :ANALYSIS:XY1:
WINDOW MAIN

:ANALysis:XY<x>:XTRace

Function Sets the X-axis trace of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:YTRace {<NRf>}
:ANALysis:XY<x>:YTRace?
<x> = 1 or 2
<NRf> = 1 to 8

Example :ANALYSIS:XY1:YTRACE 1
:ANALYSIS:XY1:YTRACE? -> :ANALYSIS:XY1:
YTRACE 1

:ANALysis:XY<x>:YTRace

Function Sets the Y-axis trace of the XY display or queries the current setting.

Syntax :ANALysis:XY<x>:YTRace {<NRf>}
:ANALysis:XY<x>:YTRace?
<x> = 1 or 2
<NRf> = 1 to 8

Example :ANALYSIS:XY1:YTRACE 1
:ANALYSIS:XY1:YTRACE? -> :ANALYSIS:XY1:
YTRACE 1

5.4 ASETup Group

:ASETup:EXECute

Function Execute auto setup.

Syntax :ASETup:EXECute

Example :ASETUP:EXECUTE

:ASETup:UNDO

Function Cancels auto setup that has been executed.

Syntax :ASETup:UNDO

Example :ASETUP:UNDO

5.5 CALibrate Group

:CALibrate?

Function Queries all settings related to the calibration.

Syntax :CALibrate?

Example :CALIBRATE? -> :CALIBRATE:MODE AUTO

:CALibrate:EXECute

Function Executes calibration.

Syntax :CALibrate:EXECute

Example :CALIBRATE:EXECUTE

:CALibrate:MODE

Function Turns ON/OFF the auto calibration or queries the current setting.

Syntax :CALibrate:MODE {AUTO|OFF}

:CALibrate:MODE?

Example :CALIBRATE:MODE AUTO

:CALIBRATE:MODE? -> :CALIBRATE:

MODE AUTO

5.6 CHANnel Group

:CHANnel<x>?

Function Queries all settings related to the channel.

Syntax :CHANnel<x>?
<x> = 1 to 4

:CHANnel<x>:BWIDth

Function Sets the input filter of the channel or queries the current setting.

Syntax :CHANnel<x>:BWIDth {<Frequency>|FULL}
:CHANnel<x>:BWIDth?
<x> = 1 to 4
<Frequency> = See the DL6000/DLM6000 User's Manual

Example :CHANNEL1:BWIDTh FULL
:CHANNEL1:BWIDTh? -> :CHANNEL1:
BWIDTh FULL

:CHANnel<x>:COUPling

Function Sets the input coupling of the channel or queries the current setting.

Syntax :CHANnel<x>:COUPling {AC|DC|DC50|GND}
:CHANnel<x>:COUPling?
<x> = 1 to 4

Example :CHANNEL1:COUPLING GND
:CHANNEL1:COUPLING? -> :CHANNEL1:
COUPLING GND

:CHANnel<x>:DESKew

Function Sets the skew correction of the channel or queries the current setting.

Syntax :CHANnel<x>:DESKew {<Time>}
:CHANnel<x>:DESKew?
<x> = 1 to 4
<Time> = -80 to 80 ns in 10-ps steps

Example :CHANNEL1:DESKew 1NS
:CHANNEL1:DESKew? -> :CHANNEL1:
DESKew 1.000E-09

:CHANnel<x>:DISPlay

Function Turns ON/OFF the display of the channel or queries the current setting.

Syntax :CHANnel<x>:DISPlay {<Boolean>}
:CHANnel<x>:DISPlay?
<x> = 1 to 4

Example :CHANNEL1:DISPlay ON
:CHANNEL1:DISPlay? -> :CHANNEL1:
DISPlay 1

:CHANnel<x>:INVert

Function Turns ON/OFF the inverted display of the channel or queries the current setting.

Syntax :CHANnel<x>:INVert {<Boolean>}
:CHANnel<x>:INVert?
<x> = 1 to 4

Example :CHANNEL1:INVERT ON
:CHANNEL1:INVERT -> :CHANNEL1:INVERT 1

:CHANnel<x>:LABel?

Function Queries all settings related to the waveform label of the channel.

Syntax :CHANnel<x>:LABel?
<x> = 1 to 4

Example :CHANNEL1:LABEL? -> :CHANNEL1:LABEL:
DEFINE "CH1";MODE 0

:CHANnel<x>:LABel[:DEFine]

Function Sets the waveform label of channel or queries the current setting.

Syntax :CHANnel<x>:LABel[:DEFine] {<String>}
:CHANnel<x>:LABel[:DEFine]?
<x> = 1 to 4
<String> = Up to 8 characters

Example :CHANNEL1:LABEL:DEFINE "CH1"
:CHANNEL1:LABEL:DEFINE? -> :CHANNEL1:
LABEL:DEFINE "CH1"

:CHANnel<x>:LABel:MODE

Function Turns ON/OFF the waveform label display of the channel or queries the current setting.

Syntax :CHANnel<x>:LABel:MODE {<Boolean>}
:CHANnel<x>:LABel:MODE?
<x> = 1 to 4

Example :CHANNEL1:LABEL:MODE ON
:CHANNEL1:LABEL:MODE? -> :CHANNEL1:
LABEL:MODE 1

:CHANnel<x>:LSCale?

Function Queries all the linear scaling settings of a channel.

Syntax :CHANnel<x>:LSCale?
<x> = 1 to 4

:CHANnel<x>:LSCale:AVAlue

Function Sets or queries a scaling coefficient A value.

Syntax :CHANnel<x>:LSCale:AVAlue {<NRF>}
:CHANnel<x>:LSCale:AVAlue?
<x> = 1 to 4
<NRF> = -1.0000E+31 to 1.0000E+31

Example :CHANNEL1:LSCALE:AVAlue 10
:CHANNEL1:LSCALE:AVAlue? -> :CHANNEL1:
LSCALE:AVAlue 10.0000E+00

:CHANnel<x>:LSCale:BVALue

Function Sets or queries an offset B value.

Syntax :CHANnel<x>:LSCale:BVALue {<NRf>}

:CHANnel<x>:LSCale:BVALue?

<x> = 1 to 4

<NRf> = -1.0000E+31 to 1.0000E+31

Example :CHANNEL1:LSCALE:BVALUE 10

:CHANNEL1:LSCALE:BVALUE? -> :CHANNEL1:
LSCALE:BVALUE 10.0000E+00

:CHANnel<x>:LSCale:MODE

Function Sets or queries the on/off status of linear scaling.

Syntax :CHANnel<x>:LSCale:MODE {<Boolean>}

:CHANnel<x>:LSCale:MODE?

<x> = 1 to 4

Example :CHANNEL1:LSCALE:MODE ON

:CHANNEL1:LSCALE:MODE? -> :CHANNEL1:
LSCALE:MODE 1

:CHANnel<x>:LSCale:UNIT

Function Sets or queries a unit that is attached to linear scaling results.

Syntax :CHANnel<x>:LSCale:UNIT {<String>}

:CHANnel<x>:LSCale:UNIT?

<x> = 1 to 4

<String> = Up to four characters

Example :CHANNEL1:LSCALE:UNIT "EU"

:CHANNEL1:LSCALE:UNIT? -> :CHANNEL1:
LSCALE:UNIT "EU"

Description You can only use the characters and symbols that appear on the DL6000/DLM6000 soft keyboard. Assignment of a unit never affects the scale value.

:CHANnel<x>:OFFSet

Function Sets the offset voltage of the channel or queries the current setting.

Syntax :CHANnel<x>:OFFSet

{<Voltage>|<Current>}

:CHANnel<x>:OFFSet?

<x> = 1 to 4

<Voltage> and <Current> = See the DL6000/DLM6000 User's Manual.

Example :CHANNEL1:OFFSET 1V

:CHANNEL1:OFFSET? -> :CHANNEL1:
OFFSET 1.000E+00

:CHANnel<x>:POSition

Function Sets the vertical position of the channel or queries the current setting.

Syntax :CHANnel<x>:POSition {<NRf>}

:CHANnel<x>:POSition?

<x> = 1 to 4

<NRf> = -4 to 4 (div)

Example :CHANNEL1:POSITION 1

:CHANNEL1:POSITION? -> :CHANNEL1:
POSITION 1.000E+00

:CHANnel<x>:PROBe?

Function Queries all settings related to the probe attenuation of the channel.

Syntax :CHANnel<x>:PROBe?

<x> = 1 to 4

Example :CHANNEL1:PROBE? -> :CHANNEL1:PROBE:
MODE 1

:CHANnel<x>:PROBe[:MODE]

Function Sets the probe attenuation of the channel or queries the current setting.

Syntax :CHANnel<x>:PROBe[:MODE] {<NRf>|AUTO|C1|C10|C100}

:CHANnel<x>:PROBe[:MODE]?

<x> = 1 to 4

<NRf> = 1,2,5,10,20,50,100,200,500,1000

Example :CHANNEL1:PROBE:MODE 1

:CHANNEL1:PROBE:MODE? -> :CHANNEL1:
PROBE:MODE 1

:ChanneL<x>:PROBe:AUTO?

Function Queries the probe attenuation of the channel when set to AUTO.

Syntax :ChanneL<x>:PROBe:AUTO?

<x> = 1 to 4

Example :CHANNEL1:PROBE:AUTO? -> :CHANNEL1:
PROBE:AUTO 1

:CHANnel<x>:PZCalibrate[:EXECute]

Function Execute the zero adjustment of the current probe of the channel.

Syntax :CHANnel<x>:PZCalibrate[:EXECute]

<x> = 1 to 4

Example :CHANNEL1:PZCALIBRATE:EXECUTE

:CHANnel<x>:VDIV

Function Sets the vertical sensitivity (V/div) of the channel or queries the current setting.

Syntax :CHANnel<x>:VDIV {<Voltage>|<Current>}

:CHANnel<x>:VDIV?

<x> = 1 to 4

<Voltage> and <Current> = See the DL6000/DLM6000 User's Manual.

Example :CHANNEL1:VDIV 5V

:CHANNEL1:VDIV? -> :CHANNEL1:
VDIV 5.000E+00

5.7 CLEar Group

:CLEar

Function Clears traces.

Syntax :CLEar

Example :CLEAR

5.8 COMMunicate Group

The commands in this group deal with communications. There are no front panel keys that correspond to the commands in this group.

:COMMunicate?

Function Queries all settings related to communications.
Syntax :COMMunicate?

:COMMunicate:HEADer

Function Sets whether to add a header to the response to a query (example CHANNEL1:VOLTAGE:PROBE 10) or not add the header (example 10) or queries the current setting.
Syntax :COMMunicate:HEADer {<Boolean>}
:COMMunicate:HEADer?
Example :COMMUNICATE:HEADER ON
:COMMUNICATE:HEADER? -> :COMMUNICATE:HEADER 1

:COMMunicate:LOCKout

Function Sets or clears local lockout.
Syntax :COMMunicate:LOCKout {<Boolean>}
:COMMunicate:LOCKout?
Example :COMMUNICATE:LOCKOUT ON
:COMMUNICATE:LOCKOUT? -> :COMMUNICATE:LOCKOUT 1

Description This command is dedicated to the USB and Ethernet interface (option).

:COMMunicate:OPSE (Operation Pending Status Enable register)

Function Sets the overlap command that is used by the *OPC, *OPC?, and *WAI commands or queries the current setting.
Syntax :COMMunicate:OPSE <Register>
:COMMunicate:OPSE?
<Register> = 0 to 65535, :COMMunicate:OVERlap
See the command diagram.
Example :COMMUNICATE:OPSE 65535
:COMMUNICATE:OPSE? -> :COMMUNICATE:OPSE 2400

Description In the above example, all bits are set to 1 to make all overlap commands applicable. However, bits fixed to 0 are not set to 1. Thus, the response to the query indicates 1 for bits 5, 6, 8, and 11 only.

:COMMunicate:OPSR? (Operation Pending Status Register)

Function Queries the value of the operation pending status register.
Syntax :COMMunicate:OPSR?
Example :COMMUNICATE:OPSR? -> 0
Description For details on the operation pending status register, see the figure for the :COMMunicate:OVERlap command.

:COMMunicate:OVERlap

Function Sets the commands to operate as overlap commands or queries the current setting.
Syntax :COMMunicate:OVERlap <Register>
:COMMunicate:OVERlap?
<Register> = 0 to 65535
Example :COMMUNICATE:OVERLAP 65535
:COMMUNICATE:OVERLAP? -> :COMMUNICATE:OVERLAP 2400

Description • In the above example, all bits are set to 1 to make all overlap commands applicable. However, bits fixed to 0 are not set to 1. Thus, the response to the query indicates 1 for bits 5, 6, 8, and 11 only.
• For the description of how to synchronize the program using :COMMunicate:OVERlap, see page 4-7.
• In the above example, bits 5, 6, 8, and 11 are set to 1 to make all overlap commands applicable.

Operation pending status register/overlap enable register

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
0	0	0	0	SCH	0	0	HST	0	ACS	PRN	0	0	0	0	0

When bit 5 (PRN) = 1:

Built-in printer operation not complete

When bit 6 (ACS) = 1:

Access to the medium not complete.

When bit 8 (HST) = 1:

History search execution not complete

When bit 11 (SCH) = 1:

Search execution not complete

:COMMunicate:REMote

Function Sets remote or local. ON is remote mode.
Syntax :COMMunicate:REMote {<Boolean>}
:COMMunicate:REMote?
Example :COMMUNICATE:REMOTE ON
:COMMUNICATE:REMOTE? -> :COMMUNICATE:REMOTE 1

Description This command is dedicated to the USB and Ethernet interface (option).

5.8 COMMunicate Group

:COMMunicate:STATus?

Function Queries line-specific status.

Syntax :COMMunicate:STATus?

Example :COMMUNICATE:STATUS? -> :COMMUNICATE:
STATUS 0

Description The meaning of each status bit is as follows:

Bit	GP-IB
0	Unrecoverable transmission error
1	Always 0
2	Always 0
3 or greater	Always 0

For USB and Ethernet communications, 0 is always returned.

The status bit is set when the corresponding cause occurs and cleared when it is read.

:COMMunicate:VERBoSe

Function Sets whether to return the response to a query using full spelling (example CHANNEL1:VOLTAGE:PROBE 10) or using abbreviation (example CHAN:PROB 10) or queries the current setting.

Syntax :COMMunicate:VERBoSe {<Boolean>}
:COMMunicate:VERBoSe?

Example :COMMUNICATE:VERBOSE ON
:COMMUNICATE:VERBOSE? -> :COMMUNICATE:
VERBOSE 1

:COMMunicate:WAIT

Function Waits for one of the specified extended events to occur.

Syntax :COMMunicate:WAIT <Register>
<Register> = 0 to 65535 (extended event register, see page 6-5.)

Example :COMMUNICATE:WAIT 65535

Description For the description of how to synchronize the program using :COMMunicate:WAIT, see page 4-8.

:COMMunicate:WAIT?

Function Creates the response that is returned when the specified event occurs.

Syntax :COMMunicate:WAIT? <Register>
<Register> = 0 to 65535 (extended event register, see page 6-5.)

Example :COMMUNICATE:WAIT? 65535 -> 1

5.9 CURSor Group

:CURSor?

Function Queries all settings related to the cursor measurement.

Syntax :CURSor?

:CURSor:DISPlay

Function Turns ON/OFF the cursor or queries the current setting.

Syntax :CURSor:DISPlay {<Boolean>}
:CURSor:DISPlay?

Example :CURSOR:DISPLAY ON
:CURSOR:DISPLAY? -> :CURSOR:DISPLAY 1

:CURSor:HORizontal?

Function Queries all settings related to the ΔV cursors.

Syntax :CURSor:HORizontal?

:CURSor:HORizontal:BASic?

Function Queries all settings related to basic items of the ΔV cursors.

Syntax :CURSor:HORizontal:BASic?

:CURSor:HORizontal[:BASic]:ALL

Function Turns ON/OFF all basic items of the ΔV cursors.

Syntax :CURSor:HORizontal[:BASic]:ALL
{<Boolean>}

Example :CURSOR:HORIZONTAL:BASIC:ALL ON

:CURSor:HORizontal[:BASic]:DV?

Function Queries all settings related to the ΔV measurement of the ΔV cursors.

Syntax :CURSor:HORizontal[:BASic]:DV?

:CURSor:HORizontal[:BASic]:DV:STATe

Function Turns ON/OFF the ΔV measurement of the ΔV cursors or queries the current setting.

Syntax :CURSor:HORizontal[:BASic]:DV:STATe
{<Boolean>}

Example :CURSOR:HORIZONTAL:BASIC:DV:STATE ON
:CURSOR:HORIZONTAL:BASIC:DV:STATE?
-> :CURSOR:HORIZONTAL:BASIC:DV:STATE 1

:CURSor:HORizontal[:BASic]:DV:VALue?

Function Queries the voltage value between the ΔV cursors.

Syntax :CURSor:HORizontal[:BASic]:DV:VALue?

Example :CURSOR:HORIZONTAL:BASIC:DV:VALUE?
-> :CURSOR:HORIZONTAL:BASIC:DV:
VALUE 1.000E+00

:CURSor:HORizontal[:BASic]:LINKage

Function Turns ON/OFF the ΔV cursor link or queries the current setting.

Syntax :CURSor:HORizontal[:BASic]:
LINKage {<Boolean>}

Example :CURSOR:HORIZONTAL:BASIC:LINKAGE ON
:CURSOR:HORIZONTAL:BASIC:LINKAGE?
-> :CURSOR:HORIZONTAL:BASIC:LINKAGE 1

5.9 CURSor Group

:CURSor:HORizontal[:BASic]:V<x>?

Function Queries all settings related to the ΔV cursor.

Syntax :CURSor:HORizontal[:BASic]:V<x>?
<x> = 1 or 2

:CURSor:HORizontal[:BASic]:V<x>:JUMP

Function Jumps the ΔV cursor to the center position of the zoom waveform.

Syntax :CURSor:HORizontal[:BASic]:V<x>:
JUMP {Z1|Z2}
<x>=1 or 2

Example :CURSOR:HORIZONTAL:BASIC:V1:JUMP Z1

:CURSor:HORizontal[:BASic]:V<x>:POSITION

Function Sets the ΔV cursor position or queries the current setting.

Syntax :CURSor:HORizontal[:BASic]:V<x>:
POSITION {<Nrf>}
:CURSor:HORizontal[:BASic]:V<x>:
POSITION?
<x> = 1 or 2
<Nrf> = -4 to 4 (div)

Example :CURSOR:HORIZONTAL:BASIC:V1:POSITION 1
:CURSOR:HORIZONTAL:BASIC:V1:POSITION?
-> :CURSOR:HORIZONTAL:BASIC:V1:
POSITION 1.000E+00

:CURSor:HORizontal[:BASic]:V<x>:STATE

Function Turns ON/OFF the ΔV cursor or queries the current setting.

Syntax :CURSor:HORizontal[:BASic]:V<x>:STATE
{<Boolean>}
:CURSor:HORizontal[:BASic]:V<x>:STATE?
<x> = 1 or 2

Example :CURSOR:HORIZONTAL:BASIC:V1:STATE ON
:CURSOR:HORIZONTAL:BASIC:V1:STATE?
-> :CURSOR:HORIZONTAL:BASIC:V1:STATE 1

:CURSor:HORizontal[:BASic]:V<x>:VALUE?

Function Queries the voltage value at the ΔV cursor.

Syntax :CURSor:HORizontal[:BASic]:V<x>:VALUE?
<x> = 1 or 2

Example :CURSOR:HORIZONTAL:BASIC:V1:VALUE?
-> :CURSOR:HORIZONTAL:BASIC:V1:
VALUE 1.000E+00

:CURSor:HORizontal:CALCulation?

Function Queries all settings related to calculation items of the ΔV cursors.

Syntax :CURSor:HORizontal:CALCulation?

:CURSor:HORizontal:CALCulation:ALL

Function Turns ON/OFF all calculation items of the ΔV cursors.

Syntax :CURSor:HORizontal:CALCulation:
ALL {<Boolean>}

Example :CURSOR:HORIZONTAL:CALCULATION:ALL ON

:CURSor:HORizontal:CALCulation:DEFINE<x>

Function Sets the equation of the calculation item of the ΔV cursor or queries the current setting.

Syntax :CURSor:HORizontal:CALCulation:
DEFINE<x> {<String>}
:CURSor:HORizontal:CALCulation:
DEFINE<x>?
<x> = 1 to 4

<String> = Up to 128 characters

Example :CURSOR:HORIZONTAL:CALCULATION:
DEFINE1 "V1"
:CURSOR:HORIZONTAL:CALCULATION:DEFINE1?
-> :CURSOR:HORIZONTAL:CALCULATION:
DEFINE1 "V1"

:CURSor:HORizontal:CALCulation:STATE<x>

Function Turns ON/OFF the calculation item of the ΔV cursor or queries the current setting.

Syntax :CURSor:HORizontal:CALCulation:
STATE<x> {<Boolean>}
:CURSor:HORizontal:CALCulation:
STATE<x>?
<x> = 1 to 4

Example :CURSOR:HORIZONTAL:CALCULATION:
STATE1 ON
:CURSOR:HORIZONTAL:CALCULATION:STATE1?
-> :CURSOR:HORIZONTAL:CALCULATION:
STATE1 1

:CURSor:HORizontal:CALCulation:VALUE<x>?

Function Queries the measured value of the calculation item of the ΔV cursor.

Syntax :CURSor:HORizontal:CALCulation:
VALUE<x>?
<x> = 1 to 4

Example :CURSOR:HORIZONTAL:CALCULATION:VALUE1?
-> :CURSOR:HORIZONTAL:CALCULATION:
VALUE1 0.000E+00

:CURSor:HORizontal:TRACe

Function Sets the source trace of the ΔV cursor or queries the current setting.

Syntax :CURSor:HORizontal:TRACe {<NRf>}
:CURSor:HORizontal:TRACe?
<NRf> = 1 to 8

Example :CURSor:HORIZONTAL:TRACE 1
:CURSor:HORIZONTAL:TRACE? -> :CURSor:
HORIZONTAL:TRACE 1

:CURSor:MARKer?

Function Queries all settings related to the marker cursors.

Syntax :CURSor:MARKer?

:CURSor:MARKer:CALCulation?

Function Queries all settings related to calculation items of the marker cursors.

Syntax :CURSor:MARKer:CALCulation?

:CURSor:MARKer:CALCulation:ALL

Function Turns ON/OFF all calculation items of the marker cursors.

Syntax :CURSor:MARKer:CALCulation:
ALL {<Boolean>}

Example :CURSor:MARKer:CALCULATION:ALL ON

:CURSor:MARKer:CALCulation:DEFine<x>

Function Sets the equation of the calculation item of the marker cursors or queries the current setting.

Syntax :CURSor:MARKer:CALCulation:
DEFine<x> {<String>}
:CURSor:MARKer:CALCulation:DEFine<x>?
<x> = 1 to 4
<String> = Up to 128 characters

Example :CURSor:MARKer:CALCULATION:DEFINE1 "T1"
:CURSor:MARKer:CALCULATION:DEFINE1?
-> :CURSor:MARKer:CALCULATION:
DEFINE1 "T1"

:CURSor:MARKer:CALCulation:STATE<x>

Function Turns ON/OFF the calculation item of the marker cursors or queries the current setting.

Syntax :CURSor:MARKer:CALCulation:STATE<x>
{<Boolean>}
:CURSor:MARKer:CALCulation:STATE<x>?
<x> = 1 to 4

Example :CURSor:MARKer:CALCULATION:STATE1 ON
:CURSor:MARKer:CALCULATION:STATE1?
-> :CURSor:MARKer:CALCULATION:STATE1 1

:CURSor:MARKer:CALCulation:VALue<x>?

Function Queries the measured value of the calculation item of the marker cursors.

Syntax :CURSor:MARKer:CALCulation:VALue<x>?
<x> = 1 to 4

Example :CURSor:MARKer:CALCULATION:VALUE1?
-> :CURSor:MARKer:CALCULATION:VALUE1
0.000E+00

:CURSor:MARKer:CM<x>?

Function Queries all settings related to the marker cursor.

Syntax :CURSor:MARKer:CM<x>?
<x> = 1 to 4

:CURSor:MARKer:CM<x>:ALL

Function Turns ON/OFF all items of the marker cursor.

Syntax :CURSor:MARKer:CM<x>ALL {<Boolean>}
<x> = 1 to 4

Example :CURSor:MARKer:CM1:ALL ON

:CURSor:MARKer:CM<x>:DT<x>?

Function Queries all settings related to the ΔT measurement of the cursor marker.

Syntax :CURSor:MARKer:CM<x>:DT<x>?
<x> of CM<x> = 1 to 4
<x> of DT<x> = 1 to 4

:CURSor:MARKer:CM<x>:DT<x>:STATE

Function Turns ON/OFF the ΔT measurement of the maker cursor or queries the current setting.

Syntax :CURSor:MARKer:CM<x>:DT<x>:STATE
{<Boolean>}
:CURSor:MARKer:CM<x>:DT<x>:STATE?
<x> of CM<x> = 1 to 4
<x> of DT<x> = 1 to 4

Example :CURSor:MARKer:CM1:DT2:STATE ON
:CURSor:MARKer:CM1:DT2:STATE?
-> :CURSor:MARKer:CM1:DT2:STATE 1

:CURSor:MARKer:CM<x>:DT<x>:VALue?

Function Queries the ΔT value of the marker cursor.

Syntax :CURSor:MARKer:CM<x>:DT<x>:VALue?
<x> of CM<x> = 1 to 4
<x> of DT<x> = 1 to 4

Example :CURSor:MARKer:CM1:DT2:VALUE?
-> :CURSor:MARKer:CM1:DT2:
VALUE 0.000E+00

:CURSor:MARKer:CM<x>:DV<x>?

Function Queries all settings related to the ΔV measurement of the cursor marker.

Syntax :CURSor:MARKer:CM<x>:DV<x>?
<x> of CM<x> = 1 to 4
<x> of DV<x> = 1 to 4

5.9 CURSor Group

:CURSor:MARKer:CM<x>:DV<x>:STATe

Function Turns ON/OFF the ΔV measurement of the maker cursor or queries the current setting.

Syntax :CURSor:MARKer:CM<x>:DV<x>:STATe {<Boolean>}
:CURSor:MARKer:CM<x>:DV<x>:STATe?
<x> of CM<x> = 1 to 4
<x> of DV<x> = 1 to 4

Example :CURSOR:MARKER:CM1:DV2:STATE ON
:CURSOR:MARKER:CM1:DV2:STATE?
-> :CURSOR:MARKER:CM1:DV2:STATE 1

:CURSor:MARKer:CM<x>:DV<x>:VALue?

Function Queries the ΔV value of the marker cursor.

Syntax :CURSor:MARKer:CM<x>:DV<x>:VALue?
<x> of CM<x> = 1 to 4
<x> of DV<x> = 1 to 4

Example :CURSOR:MARKER:CM1:DV2:VALUE?
-> :CURSOR:MARKER:CM1:DV2:VALUE 0

:CURSor:MARKer:CM<x>:JUMP

Function Jumps the marker cursor to the center position of the zoom waveform.

Syntax :CURSor:MARKer:CM<x>:JUMP {Z1|Z2}
<x> = 1 to 4

Example :CURSOR:MARKER:CM1:JUMP Z1

:CURSor:MARKer:CM<x>:POSition

Function Sets the marker cursor position or queries the current setting.

Syntax :CURSor:MARKer:CM<x>:POSition {<NRf>}
:CURSor:MARKer:CM<x>:POSition?
<x> = 1 to 4
<NRf> = -5 to 5 div

Example :CURSOR:MARKER:CM1:POSITION 1
:CURSOR:MARKER:CM1:POSITION?
-> :CURSOR:MARKER:CM1:POSITION 1.000E+00

:CURSor:MARKer:CM<x>:T?

Function Queries all settings related to the time measurement of the marker cursor.

Syntax :CURSor:MARKer:CM<x>:T?
<x> = 1 to 4

:CURSor:MARKer:CM<x>:T:STATe

Function Turns ON/OFF the time measurement of the maker cursor or queries the current setting.

Syntax :CURSor:MARKer:CM<x>:T:STATe {<Boolean>}
:CURSor:MARKer:CM<x>:T:STATe?
<x> = 1 to 4

Example :CURSOR:MARKER:CM1:T:STATE ON
:CURSOR:MARKER:CM1:T:STATE? -> :CURSOR:
MARKER:CM1:T:STATE 1

:CURSor:MARKer:CM<x>:T:VALue?

Function Queries the time value at the marker cursor position.

Syntax :CURSor:MARKer:CM<x>:T:VALue?
<x> = 1 to 4

Example :CURSOR:MARKER:CM1:T:VALUE? -> :CURSOR:
MARKER:CM1:T:VALUE 0.000E+00

:CURSor:MARKer:CM<x>:TRACe

Function Sets the source trace of the marker cursor or queries the current setting.

Syntax :CURSor:MARKer:CM<x>:TRACe {<NRf>|OFF}
:CURSor:MARKer:CM<x>:TRACe?
<x> = 1 to 4
<NRf> = 1 to 8

Example :CURSOR:MARKER:CM1:TRACE 1
:CURSOR:MARKER:CM1:TRACE? -> :CURSOR:
MARKER:CM1:TRACE 1

:CURSor:MARKer:CM<x>:V?

Function Queries all settings related to the voltage measurement of the marker cursor.

Syntax :CURSor:MARKer:CM<x>:V?
<x> = 1 to 4

:CURSor:MARKer:CM<x>:V:STATe

Function Turns ON/OFF the voltage measurement of the maker cursor or queries the current setting.

Syntax :CURSor:MARKer:CM<x>:V:STATe {<Boolean>}
:CURSor:MARKer:CM<x>:V:STATe?
<x> = 1 to 4

Example :CURSOR:MARKER:CM1:V:STATE ON
:CURSOR:MARKER:CM1:V:STATE? -> :CURSOR:
MARKER:CM1:V:STATE 1

:CURSor:MARKer:CM<x>:V:VALue?

Function Queries the voltage value at the marker cursor position.

Syntax :CURSor:MARKer:CM<x>:V:VALue?
<x> = 1 to 4

Example :CURSOR:MARKER:CM1:V:VALUE? -> :CURSOR:
MARKER:CM1:V:VALUE 0.000E+00

:CURSor:MARKer:FORM

Function Sets the marker cursor form or queries the current setting.

Syntax :CURSor:MARKer:FORM {LINE|MARK}
:CURSor:MARKer:FORM?

Example :CURSOR:MARKER:FORM LINE
:CURSOR:MARKER:FORM?
-> :CURSOR:MARKER:FORM LINE

:CURSor:SERial?

Function Queries all settings related to the serial cursors.

Syntax :CURSor:SERial?

:CURSor:SErIal:SCURsor<x>?

Function Queries all settings related to the serial cursor.

Syntax :CURSor:SErIal:SCURsor<x>?
<x> = 1 or 2

:CURSor:SErIal:SCURsor<x>:ACTive

Function Sets the active level of the serial cursor or queries the current setting.

Syntax :CURSor:SErIal:SCURsor<x>:ACTive {HIGH|LOW}
:CURSor:SErIal:SCURsor<x>:ACTive?
<x> = 1 or 2

Example :CURSOR:SERIAL:SCURSOr1:ACTIVE HIGH
:CURSOR:SERIAL:SCURSOr1:ACTIVE?
-> :CURSOR:SERIAL:SCURSOr1:ACTIVE HIGH

:CURSor:SErIal:SCURsor<x>:BCOunt

Function Sets the bit length of the serial cursor or queries the current setting.

Syntax :CURSor:SErIal:SCURsor<x>:BCOunt {<NRf>}
:CURSor:SErIal:SCURsor<x>:BCOunt?
<x> = 1 or 2
<NRf> = 1 to 128 (bits)

Example :CURSOR:SERIAL:SCURSOr1:BCOUNT 8
:CURSOR:SERIAL:SCURSOr1:BCOUNT?
-> :CURSOR:SERIAL:SCURSOr1:BCOUNT 8

:CURSor:SErIal:SCURsor<x>:BITRate

Function Sets the bit rate of the serial cursor or queries the current setting.

Syntax :CURSor:SErIal:SCURsor<x>:BITRate {<NRf>}
:CURSor:SErIal:SCURsor<x>:BITRate?
<x> = 1 or 2
<NRf> = 1 to 1 G (bps)

Example :CURSOR:SERIAL:SCURSOr1:BITRATE 10
:CURSOR:SERIAL:SCURSOr1:BITRATE?
-> :CURSOR:SERIAL:SCURSOr1:BITRATE 10.00E+00

:CURSor:SErIal:SCURsor<x>:BITOrder

Function Sets the bit order of the serial cursor or queries the current setting.

Syntax :CURSor:SErIal:SCURsor<x>:BITOrder {LSBFirst|MSBFirst}
:CURSor:SErIal:SCURsor<x>:BITOrder?
<x> = 1 or 2

Example :CURSOR:SERIAL:SCURSOr1:BITORDER LSBFIRST
:CURSOR:SERIAL:SCURSOr1:BITORDER?
-> :CURSOR:SERIAL:SCURSOr1:BITORDER LSBFIRST

:CURSor:SErIal:SCURsor<x>:FORMat

Function Sets the display format of the serial cursor or queries the current setting.

Syntax :CURSor:SErIal:SCURsor<x>:FORMat {BINary|HEXa}
:CURSor:SErIal:SCURsor<x>:FORMat?
<x> = 1 or 2

Example :CURSOR:SERIAL:SCURSOr1:FORMAT HEXA
:CURSOR:SERIAL:SCURSOr1:FORMAT?
-> :CURSOR:SERIAL:SCURSOr1:FORMAT HEXA

:CURSor:SErIal:SCURsor<x>:HYSTeresis

Function Sets the hysteresis of the serial cursor or queries the current setting.

Syntax :CURSor:SErIal:SCURsor<x>:HYSTeresis {<NRf>}
:CURSor:SErIal:SCURsor<x>:HYSTeresis?
<x> = 1 or 2
<NRf> = 0 to 4 (div)

Example :CURSOR:SERIAL:SCURSOr1:HYSTERESIS 1
:CURSOR:SERIAL:SCURSOr1:HYSTERESIS?
-> :CURSOR:SERIAL:SCURSOr1:HYSTERESIS 1.000E+00

:CURSor:SErIal:SCURsor<x>:JUMP

Function Moves the serial cursor to the specified direction.

Syntax :CURSor:SErIal:SCURsor<x>:JUMP {BACK|FRONT}
<x> = 1 or 2

Example :CURSOR:SERIAL:SCURSOr1:JUMP BACK

:CURSor:SErIal:SCURsor<x>:LEVel

Function Sets the threshold level of the serial cursor or queries the current setting.

Syntax :CURSor:SErIal:SCURsor<x>:LEVel {<Voltage>|<Current>}
:CURSor:SErIal:SCURsor<x>:LEVel?
<x> = 1 or 2
<Voltage> and <Current> = See the DL6000/DLM6000 User's Manual.

Example :CURSOR:SERIAL:SCURSOr1:LEVEL 0V
:CURSOR:SERIAL:SCURSOr1:LEVEL?
-> :CURSOR:SERIAL:SCURSOr1:LEVEL 0.000E+00

:CURSor:SErIal:SCURsor<x>:MODE

Function Turns ON/OFF the serial cursor or queries the current setting.

Syntax :CURSor:SErIal:SCURsor<x>:MODE {<Boolean>}
:CURSor:SErIal:SCURsor<x>:MODE?
<x> = 1 or 2

Example :CURSOR:SERIAL:SCURSOr1:MODE ON
:CURSOR:SERIAL:SCURSOr1:MODE?
-> :CURSOR:SERIAL:SCURSOr1:MODE 1

5.9 CURSor Group

:CURSor:SErIAL:SCURsor<x>:POSition

Function Sets the serial cursor position or queries the current setting.

Syntax :CURSor:SErIAL:SCURsor<x>:
POSition {<Nrf>}
:CURSor:SErIAL:SCURsor<x>:POSition?
<x> = 1 or 2
<Nrf> = -5 to 5 div

Example :CURSOR:SERIAL:SCURSOR1:POSITION 1
:CURSOR:SERIAL:SCURSOR1:POSITION?
-> :CURSOR:SERIAL:SCURSOR1:
POSITION 1.000E+00

:CURSor:SErIAL:SCURsor<x>:TRACE

Function Sets the trace of the serial cursor or queries the current setting.

Syntax :CURSor:SErIAL:SCURsor<x>:TRACE {<Nrf>|
A<y>|B<y>|C<y>|D<y>}
:CURSor:SErIAL:SCURsor<x>:TRACE?
<x> = 1 or 2
<Nrf> = 1 to 8
<y> = 0 to 7

Example :CURSOR:SERIAL:SCURSOR1:TRACE 1
:CURSOR:SERIAL:SCURSOR1:TRACE?
-> :CURSOR:SERIAL:SCURSOR1:TRACE 1

Description {A<y>|B<y>|C<y>|D<y>} are only available on the DLM6000. On 16-bit models, you cannot select {B<y>|D<y>}.

:CURSor:SErIAL:SCURsor<x>:TRACK

Function Jumps the serial cursor onto the zoom waveform.

Syntax :CURSor:SErIAL:SCURsor<x>:TRACK {OFF|
Z1|Z2}
:CURSor:SErIAL:SCURsor<x>:TRACK?
<x> = 1 or 2

Example :CURSOR:SERIAL:SCURSOR1:TRACK OFF
:CURSOR:SERIAL:SCURSOR1:TRACK?
-> :CURSOR:SERIAL:SCURSOR1:TRACK OFF

:CURSor:SErIAL:SCURsor<x>:VALue?

Function Queries the measured value of the serial cursor.

Syntax :CURSor:SErIAL:SCURsor<x>:VALue?
<x> = 1 or 2

Example :CURSOR:SERIAL:SCURSOR1:VALUE?
-> :CURSOR:SERIAL:SCURSOR1:
VALUE "11000111"

:CURSor:TYPE

Function Sets the cursor type or queries the current setting.

Syntax :CURSor:TYPE {HORizontal|HAvVertical|
MARkeR|SErIAL|VERTical|VT}
:CURSor:TYPE?

Example :CURSOR:TYPE HORIZONTAL
:CURSOR:TYPE? -> :CURSOR:TYPE HORIZONTAL

:CURSor:VERTical?

Function Queries all settings related to the ΔT cursors.

Syntax :CURSor:VERTical?

:CURSor:VERTical:BASic?

Function Queries all settings related to basic items of the ΔT cursors.

Syntax :CURSor:VERTical:BASic?

:CURSor:VERTical[:BASic]:ALL

Function Turns ON/OFF all basic items of the ΔT cursors.

Syntax :CURSor:VERTical[:BASic]:
ALL {<Boolean>}

Example :CURSOR:VERTICAL:BASIC:ALL ON

:CURSor:VERTical[:BASic]:DT?

Function Queries all settings related to the ΔT measurement of the ΔT cursors.

Syntax :CURSor:VERTical[:BASic]:DT?

:CURSor:VERTical[:BASic]:DT:STATE

Function Turns ON/OFF the ΔT measurement of the ΔT cursors or queries the current setting.

Syntax :CURSor:VERTical[:BASic]:DT:
STATE {<Boolean>}

Example :CURSOR:VERTICAL:BASIC:DT:STATE ON
:CURSOR:VERTICAL:BASIC:DT:STATE?
-> :CURSOR:VERTICAL:BASIC:DT:STATE 1

:CURSor:VERTical[:BASic]:DT:VALue?

Function Queries the ΔT value of the ΔT cursors.

Syntax :CURSor:VERTical[:BASic]:DT:VALue?

Example :CURSOR:VERTICAL:BASIC:DT:VALUE?
-> :CURSOR:VERTICAL:BASIC:DT:
VALUE 1.000E+00

:CURSor:VERTical[:BASic]:LINKage

Function Turns ON/OFF the ΔT cursor link or queries the current setting.

Syntax :CURSor:VERTical[:BASic]:
LINKage {<Boolean>}

Example :CURSOR:VERTICAL:BASIC:LINKAGE ON
:CURSOR:VERTICAL:BASIC:LINKAGE?
-> :CURSOR:VERTICAL:BASIC:LINKAGE 1

:CURSor:VERTical[:BASic]:PERDt?

Function Queries all settings related to the $1/\Delta T$ measurement of the ΔT cursors.

Syntax :CURSor:VERTical[:BASic]:PERDt?

:CURSor:VERTical[:BASic]:PERDt:StAtE

Function Turns ON/OFF the 1/ ΔT measurement of the ΔT cursors or queries the current setting.

Syntax :CURSor:VERTical[:BASic]:PERDt:StAtE {<Boolean>}

Example :CURSor:VERTical[:BASic]:PERDt:StAtE?
:CURSOR:VERTICAL:BASIC:PERDT:STATE ON
-> :CURSOR:VERTICAL:BASIC:PERDT:STATE? 1

:CURSor:VERTical[:BASic]:PERDt:VALue?

Function Queries the 1/ ΔT value of the ΔT cursors.

Syntax CURSor:VERTical[:BASic]:PERDt:VALue?

Example CURSOR:VERTICAL:BASIC:PERDT:VALUE?
-> :CURSOR:VERTICAL:BASIC:PERDT:VALUE 0.000E+00

:CURSor:VERTical[:BASic]:T<x>?

Function Queries all settings related to the ΔT cursor.

Syntax :CURSor:VERTical[:BASic]:T<x>?<x> = 1 or 2

:CURSor:VERTical[:BASic]:T<x>:JUMP

Function Jumps to the center position of the zoom waveform of the ΔT cursor.

Syntax :CURSor:VERTical[:BASic]:T<x>:JUMP {Z1|Z2}<x> = 1 or 2

Example :CURSOR:VERTICAL:BASIC:T1:JUMP Z1

:CURSor:VERTical[:BASic]:T<x>:POSition

Function Sets the ΔT cursor position or queries the current setting.

Syntax :CURSor:VERTical[:BASic]:T<x>:POSition {<Nrf>}
:CURSor:VERTical[:BASic]:T<x>:POSition?<x> = 1 or 2
<Nrf> = -5 to 5 (div)

Example :CURSOR:VERTICAL:BASIC:T1:POSITION 1
:CURSOR:VERTICAL:BASIC:T1:POSITION?
-> :CURSOR:VERTICAL:BASIC:T1:POSITION 1.000E+00

:CURSor:VERTical[:BASic]:T<x>:StAtE

Function Turns ON/OFF the ΔT cursor or queries the current setting.

Syntax :CURSor:VERTical[:BASic]:T<x>:StAtE {<Boolean>}
:CURSor:VERTical[:BASic]:T<x>:StAtE?<x> = 1 or 2

Example :CURSOR:VERTICAL:BASIC:T1:STATE ON
:CURSOR:VERTICAL:BASIC:T1:STATE?
-> :CURSOR:VERTICAL:BASIC:T1:STATE 1

:CURSor:VERTical[:BASic]:T<x>:VALue?

Function Queries the time value at the ΔT cursor.

Syntax :CURSor:VERTical[:BASic]:T<x>:VALue?<x> = 1 or 2

Example :CURSOR:VERTICAL:BASIC:T1:VALUE?
-> :CURSOR:VERTICAL:BASIC:T1:VALUE 0.000E+00

:CURSor:VERTical:CALCulation?

Function Queries all settings related to calculation items of the ΔT cursors.

Syntax :CURSor:VERTical:CALCulation?

:CURSor:VERTical:CALCulation:ALL

Function Turns ON/OFF all calculation items of the ΔT cursors.

Syntax :CURSor:VERTical:CALCulation:ALL {<Boolean>}

Example :CURSOR:VERTICAL:CALCULATION:ALL ON

:CURSor:VERTical:CALCulation:DEFine<x>

Function Sets the equation of the calculation item of the ΔT cursor or queries the current setting.

Syntax :CURSor:VERTical:CALCulation:DEFine<x> {<String>}
:CURSor:VERTical:CALCulation:DEFine<x>?<x> = 1 to 4
<String> = Up to 128 characters

Example :CURSOR:VERTICAL:CALCULATION:DEFINE1 "T1"
:CURSOR:VERTICAL:CALCULATION:DEFINE1?
-> :CURSOR:VERTICAL:CALCULATION:DEFINE1 "T1"

:CURSor:VERTical:CALCulation:StAtE<x>

Function Turns ON/OFF the calculation item of the ΔT cursor or queries the current setting.

Syntax :CURSor:VERTical:CALCulation:StAtE<x> {<Boolean>}
:CURSor:VERTical:CALCulation:StAtE<x>?<x> = 1 to 4

Example :CURSOR:VERTICAL:CALCULATION:STATE1 ON
:CURSOR:VERTICAL:CALCULATION:STATE1?
-> :CURSOR:VERTICAL:CALCULATION:STATE1 1

:CURSor:VERTical:CALCulation:VALue<x>?

Function Queries the measured value of the calculation item of the ΔT cursor.

Syntax :CURSor:VERTical:CALCulation:VALue<x>?<x> = 1 to 4

Example :CURSOR:VERTICAL:CALCULATION:VALUE1?
-> :CURSOR:VERTICAL:CALCULATION:VALUE1 0.000E+00

5.9 CURSor Group

:CURSor:VT?

Function Queries all settings related to the VT cursor.
Syntax :CURSor:VT?

:CURSor:VT:BASic?

Function Queries all settings related to basic items of the VT cursor.
Syntax :CURSor:VT:BASic?

:CURSor:VT[:BASic]:ALL

Function Turns ON/OFF all basic items of the VT cursor.
Syntax :CURSor:VT[:BASic]:ALL {<Boolean>}
Example :CURSOR:VT:BASIC:ALL ON

:CURSor:VT[:BASic]:GROup<x>?

Function Queries all settings related to the logic group of the VT cursor.
Syntax :CURSor:VT[:BASic]:GROup<x>?
<x> = 1 to 5

:CURSor:VT[:BASic]:GROup<x>:BITorder

Function Sets the measurement bit order of the logic group of the VT cursor or queries the current setting.
Syntax :CURSor:VT[:BASic]:GROup<x>:
BITorder {LSBFirst|MSBFirst}
:CURSor:VT[:BASic]:GROup<x>:BITorder?
<x> = 1 to 5
Example :CURSOR:VT:BASIC:GROUP1:
BITORDER LSBFIRST
:CURSOR:VT:BASIC:GROUP1:BITORDER?
-> :CURSOR:VT:BASIC:GROUP1:
BITORDER LSBFIRST

:CURSor:VT[:BASic]:GROup<x>:FORMat

Function Sets the display format of the measured value of the logic group of the VT cursor or queries the current setting.
Syntax :CURSor:VT[:BASic]:GROup<x>:
FORMat {BINary|HEXa}
:CURSor:VT[:BASic]:GROup<x>:FORMat?
<x> = 1 to 5
Example :CURSOR:VT:BASIC:GROUP1:FORMAT HEXA
:CURSOR:VT:BASIC:GROUP1:FORMAT?
-> :CURSOR:VT:BASIC:GROUP1:FORMAT HEXA

:CURSor:VT[:BASic]:GROup<x>:STATe

Function Turns ON/OFF the measured value of the logic group of the VT cursor or queries the current setting.
Syntax :CURSor:VT[:BASic]:GROup<x>:
STATe {<Boolean>}
:CURSor:VT[:BASic]:GROup<x>:STATe?
<x> = 1 to 5
Example :CURSOR:VT:BASIC:GROUP1:STATE ON
:CURSOR:VT:BASIC:GROUP1:STATE?
-> :CURSOR:VT:BASIC:GROUP1:STATE 1

:CURSor:VT[:BASic]:GROup<x>:VALue?

Function Queries the measured value of the logic group of the VT cursor.
Syntax :CURSor:VT[:BASic]:GROup<x>:VALue?
<x> = 1 to 5
Example :CURSOR:VT:BASIC:GROUP1:VALUE?
-> :CURSOR:VT:BASIC:GROUP1:
VALUE 4294967295

:CURSor:VT[:BASic]:POSition

Function Sets the VT cursor position or queries the current setting.
Syntax :CURSor:VT[:BASic]:POSition {<NRf>}
:CURSor:VT[:BASic]:POSition?
<NRf> = -5 to 5 (div)
Example :CURSOR:VT:BASIC:POSITION 1
:CURSOR:VT:BASIC:POSITION? -> :CURSOR:
VT:BASIC:POSITION 1.000E+00

:CURSor:VT[:BASic]:T?

Function Queries all settings related to the time value of the VT cursor.
Syntax :CURSor:VT[:BASic]:T?

:CURSor:VT[:BASic]:T:STATe

Function Turns ON/OFF the time value of the VT cursor or queries the current setting.
Syntax :CURSor:VT[:BASic]:T:STATe {<Boolean>}
:CURSor:VT[:BASic]:T:STATe?
Example :CURSOR:VT:BASIC:T:STATE ON
:CURSOR:VT:BASIC:T:STATE? -> :CURSOR:
VT:BASIC:T:STATE 1

:CURSor:VT[:BASic]:T:VALue?

Function Queries the time value at the VT cursor.
Syntax :CURSor:VT[:BASic]:T:VALue?
Example :CURSOR:VT:BASIC:T:VALUE? -> :CURSOR:
VT:BASIC:T:VALUE 0.000E+00

:CURSor:VT[:BASic]:V<x>?

Function Queries all settings related to the voltage value of the VT cursor.
Syntax :CURSor:VT[:BASic]:V<x>?
<x> = 1 to 8

:CURSor:VT[:BASic]:V<x>:STATe

Function Turns ON/OFF the voltage value of the VT cursor or queries the current setting.
Syntax :CURSor:VT[:BASic]:V<x>:
STATe {<Boolean>}
:CURSor:VT[:BASic]:V<x>:STATe?
<x> = 1 to 8
Example :CURSOR:VT:BASIC:V1:STATE ON
:CURSOR:VT:BASIC:V1:STATE? -> :CURSOR:
VT:BASIC:V1:STATE 1

:CURSor:VT[:BASic]:V<x>:VALue?

Function Queries the voltage value at the VT cursor.

Syntax :CURSor:VT[:BASic]:V<x>:VALue?
<x> = 1 to 8

Example :CURSOR:VT:BASIC:V1:VALUE? -> :CURSOR:
VT:BASIC:V1:VALUE 0.000E+00

:CURSor:VT:CALCulation?

Function Queries all settings related to calculation items of the VT cursor.

Syntax :CURSor:VT:CALCulation?

:CURSor:VT:CALCulation:ALL

Function Turns ON/OFF all calculation items of the VT cursor.

Syntax :CURSor:VT:CALCulation:ALL {<Boolean>}

Example :CURSOR:VT:CALCULATION:ALL ON

:CURSor:VT:CALCulation:DEFine<x>

Function Sets the equation of the calculation item of the VT cursor or queries the current setting.

Syntax :CURSor:VT:CALCulation:
DEFine<x> {<String>}
:CURSor:VT:CALCulation:DEFine<x>?
<x> = 1 to 4
<String> = Up to 128 characters

Example :CURSOR:VT:CALCULATION:DEFINE1 "T1"
:CURSOR:VT:CALCULATION:DEFINE1?
-> :CURSOR:VT:CALCULATION:DEFINE1 "T1"

:CURSor:VT:CALCulation:STATe<x>

Function Turns ON/OFF the calculation item of the VT cursor or queries the current setting.

Syntax :CURSor:VT:CALCulation:
STATe<x> {<Boolean>}
:CURSor:VT:CALCulation:STATe<x>?
<x> = 1 to 4

Example :CURSOR:VT:CALCULATION:STATE1 ON
:CURSOR:VT:CALCULATION:STATE1?
-> :CURSOR:VT:CALCULATION:STATE1 0

:CURSor:VT:CALCulation:VALue<x>?

Function Queries the measured value of the calculation item of the VT cursor.

Syntax :CURSor:VT:CALCulation:VALue<x>?
<x> = 1 to 4

Example :CURSOR:VT:CALCULATION:VALUE1?
-> :CURSOR:VT:CALCULATION:
VALUE1 0.000E+00

:CURSor:VT:JUMP

Function Jumps the VT cursor to the center position of the zoom waveform.

Syntax :CURSor:VT:JUMP {Z1|Z2}

Example :CURSOR:VT:JUMP Z1

5.10 DISPlay Group

:DISPlay?

Function Queries all settings related to the display.

Syntax :DISPlay?

:DISPlay:ACCumulate?

Function Queries all settings related to the accumulated display of waveforms.

Syntax :DISPlay:ACCumulate?

:DISPlay:ACCumulate:GRADE

Function Sets the accumulate mode or queries the current setting.

Syntax :DISPlay:ACCumulate:GRADE {COLor|INTensity}
:DISPlay:ACCumulate:GRADE?

Example :DISPLAY:ACCUMULATE:GRADE INTENSITY
:DISPLAY:ACCUMULATE:GRADE? -> :DISPLAY:ACCUMULATE:GRADE INTENSITY

:DISPlay:ACCumulate:MODE

Function Turns ON/OFF the accumulate mode or queries the current setting.

Syntax :DISPlay:ACCumulate:MODE {<Boolean>}
:DISPlay:ACCumulate:MODE?

Example :DISPLAY:ACCUMULATE:MODE ON
:DISPLAY:ACCUMULATE:MODE? -> :DISPLAY:ACCUMULATE:MODE 1

:DISPlay:ACCumulate:PERSistence?

Function Queries all settings related to persistence.

Syntax :DISPlay:ACCumulate:PERSistence?

:DISPlay:ACCumulate:PERSistence:COUNT

Function Sets the persistence count or queries the current setting.

Syntax :DISPlay:ACCumulate:PERSistence:COUNT {<Nrf>|INfInity}
:DISPlay:ACCumulate:PERSistence:COUNT?
<Nrf> = 1 to (the maximum number of history pages at the current record length)

Example :DISPLAY:ACCUMULATE:PERSISTENCE:COUNT INFINITY
:DISPLAY:ACCUMULATE:PERSISTENCE:COUNT?
-> :DISPLAY:ACCUMULATE:PERSISTENCE:COUNT INFINITY

:DISPlay:ACCumulate:PERSistence:MODE

Function Sets the persistence mode or queries the current setting.

Syntax :DISPlay:ACCumulate:PERSistence:MODE {COUNT|TIME}
:DISPlay:ACCumulate:PERSistence:MODE?

Example :DISPLAY:ACCUMULATE:PERSISTENCE:MODE COUNT
:DISPLAY:ACCUMULATE:PERSISTENCE:MODE?
-> :DISPLAY:ACCUMULATE:PERSISTENCE:MODE COUNT

:DISPlay:ACCumulate:PERSistence:TIME

Function Sets the persistence time or queries the current setting.

Syntax :DISPlay:ACCumulate:PERSistence:TIME {<Time>|INfInity}
:DISPlay:ACCumulate:PERSistence:TIME?
<Time> = 100 ms to 1 s in 100-ms steps, 1 to 10 s in 200-ms steps, 10 to 100 s in 2-s steps

Example :DISPLAY:ACCUMULATE:PERSISTENCE:TIME 1S
:DISPLAY:ACCUMULATE:PERSISTENCE:TIME?
-> :DISPLAY:ACCUMULATE:PERSISTENCE:TIME 1.000E+00

:DISPlay:BLIGHt?

Function Queries all settings related to the backlight.

Syntax :DISPlay:BLIGHt?

:DISPlay:BLIGHt:AUTOoff

Function Sets the function that automatically turns the backlight off or queries the current setting.

Syntax :DISPlay:BLIGHt:AUTOoff {<Boolean>}
:DISPlay:BLIGHt:AUTOoff?

Example :DISPLAY:BLIGHT:AUTOOFF ON
:DISPLAY:BLIGHT:AUTOOFF? -> :DISPLAY:BLIGHT:AUTOOFF 1

:DISPlay:BLIGHt:BRIGHtness

Function Sets the brightness of the backlight or queries the current setting.

Syntax :DISPlay:BLIGHt:BRIGHtness {<Nrf>}
:DISPlay:BLIGHt:BRIGHtness?
<Nrf> = 1 to 8

Example :DISPLAY:BLIGHT:BRIGHTNESS 1
:DISPLAY:BLIGHT:BRIGHTNESS?
-> :DISPLAY:BLIGHT:BRIGHTNESS 1

:DISPlay:BLIGHT:LCD

Function Turns ON/OFF the backlight or queries the current setting.

Syntax :DISPlay:BLIGHT:LCD {<Boolean>}
:DISPlay:BLIGHT:LCD?

Example :DISPLAY:BLIGHT:LCD ON
:DISPLAY:BLIGHT:LCD? -> :DISPLAY:
BLIGHT:LCD 1

:DISPlay:BLIGHT:TIMEout

Function Sets the timeout of the backlight or queries the current setting.

Syntax :DISPlay:BLIGHT:TIMEout {<NRf>}
:DISPlay:BLIGHT:TIMEout?
<NRf> = 1 to 60 (minutes)

Example :DISPLAY:BLIGHT:TIMEOUT 60
:DISPLAY:BLIGHT:TIMEOUT? -> :DISPLAY:
BLIGHT:TIMEOUT 60

:DISPlay:COLor?

Function Queries all settings related to the waveform display color.

Syntax :DISPlay:COLor?

:DISPlay:COLor:{CHANnel<x>|LOGic|LSTate|MATH<x>|REference<x>}

Function Sets the color of the waveform or queries the current setting.

Syntax :DISPlay:COLor:{CHANnel<x>|LOGic|LSTate|MATH<x>|REference<x>} {BLUE|BGREEN|CYAN|DBLue|GRAY|GREEN|LBLue|LGREEN|MAGenta|MGREEN|ORANGE|PINK|PURPLE|RED|SPINK|YELLOW}
:DISPlay:COLor:{CHANnel<x>|LOGic|LSTate|MATH<x>|REference<x>}?
<x> of CHANnel<x> = 1 to 4
<x> of MATH<x> = 1 to 4
<x> of REference<x> = 1 to 4

Example :DISPLAY:COLOR:CHANNEL1 BLUE
:DISPLAY:COLOR:CHANNEL1? -> :DISPLAY:
COLOR:CHANNEL1 BLUE

Description{LOGic|LSTate} are only available on the DLM6000.

:DISPlay:FORMat

Function Sets the display format or queries the current setting.

Syntax :DISPlay:FORMat {DUAL|QUAD|SINGLE|TRIad}
:DISPlay:FORMat?

Example :DISPLAY:FORMAT SINGLE
:DISPLAY:FORMAT? -> :DISPLAY:
FORMAT SINGLE

:DISPlay:GRATicule

Function Sets the graticule (grid) or queries the current setting.

Syntax :DISPlay:GRATicule {CROSShair|FRAME|GRID|LINE}
:DISPlay:GRATicule?

Example :DISPLAY:GRATICULE CROSSHAIR
:DISPLAY:GRATICULE? -> :DISPLAY:
GRATICULE CROSSHAIR

:DISPlay:INTENSity?

Function Queries all settings related to the intensity of the displayed items.

Syntax :DISPlay:INTENSity?
:DISPlay:INTENSity? ->

:DISPlay:INTENSity[:WAVEform]

Function Sets the intensity of the waveform or queries the current setting.

Syntax :DISPlay:INTENSity[:WAVEform] {<NRf>}
:DISPlay:INTENSity[:WAVEform]?
<NRf> = 1 to 20

Example :DISPLAY:INTENSITY:WAVEFORM 10
:DISPLAY:INTENSITY:WAVEFORM?
-> :DISPLAY:INTENSITY:WAVEFORM 10

:DISPlay:INTENSity:{CURSor|GRID|MARKer|ZBOX}

Function Sets the intensity of the display item or queries the current setting.

Syntax :DISPlay:INTENSity:{CURSor|GRID|MARKer|ZBOX} {<NRf>}
:DISPlay:INTENSity:{CURSor|GRID|MARKer|ZBOX}?
<NRf> = 0 to 31

Example :DISPLAY:INTENSITY:CURSOR 10
:DISPLAY:INTENSITY:CURSOR?
-> :DISPLAY:INTENSITY:CURSOR 10

:DISPlay:INTERpolate

Function Sets the display interpolation format or queries the current setting.

Syntax :DISPlay:INTERpolate {LINE|OFF|PULSe|SINE}
:DISPlay:INTERpolate?

Example :DISPLAY:INTERPOLATE SINE
:DISPLAY:INTERPOLATE? -> :DISPLAY:
INTERPOLATE SINE

:DISPlay:MAPPING?

Function Queries all settings related to the waveform mapping to the split screen.

Syntax :DISPlay:MAPPING?

Example :DISPLAY:MAPPING? -> :DISPLAY:MAPPING:
MODE AUTO;TRACE1 1;TRACE2 1;TRACE3 1;
TRACE4 1;TRACE5 1;TRACE6 1;TRACE7 1;
TRACE8 1

5.10 DISPlay Group

:DISPlay:MAPPing[:MODE]

Function Sets the waveform mapping mode for the split screen or queries the current setting.

Syntax :DISPlay:MAPPing[:MODE] {AUTO|MANual}
:DISPlay:MAPPing[:MODE]?

Example :DISPLAY:MAPPING:MODE AUTO
:DISPLAY:MAPPING:MODE? -> :DISPLAY:
MAPPING:MODE AUTO

:DISPlay:MAPPing:TRACe<x>

Function Sets the mapping of the waveform to the split screen or queries the current setting.

Syntax :DISPlay:MAPPing:TRACe<x> {<NRf>}
:DISPlay:MAPPing:TRACe<x>?
<x> = 1 to 8
<NRf> = 1 to 4

Example :DISPLAY:MAPPING:TRACE1 3
:DISPLAY:MAPPING:TRACE1? -> :DISPLAY:
MAPPING:TRACE1 3

:DISPlay:SVALue (Scale VALUE)

Function Sets or queries the on/off status of the scale value display.

Syntax :DISPlay:SVALue {<Boolean>}
:DISPlay:SVALue?

Example :DISPLAY:SVALUE ON:DISPLAY:SVALUE? -> :
DISPLAY:SVALUE 1

:DISPlay:TRANslucent

Function Turns ON/OFF the translucent mode or queries the current setting.

Syntax :DISPlay:TRANslucent {<Boolean>}
:DISPlay:TRANslucent?

Example :DISPLAY:TRANSLUCENT ON
:DISPLAY:TRANSLUCENT? -> :DISPLAY:
TRANSLUCENT 1

5.11 FILE Group

:FILE?

Function Queries all settings related to the specified storage medium or internal memory.

Syntax :FILE?

:FILE:DIRectory?

Function Queries all settings related to the specified storage medium.

Syntax :FILE:DIRectory?

:FILE[:DIRectory]:CDIRectory (Change Directory)

Function Sets the current directory or queries the current setting.

Syntax :FILE[:DIRectory]:CDIRectory {<String>}
:FILE[:DIRectory]:CDIRectory?
<String> = Up to 259 characters

Example :FILE:DIRectory:CDIRectory "\Flash Mem\DIR1\DIR2"

(Absolute path designation)

:FILE:DIRectory:CDIRectory "DIR2"

(Relative path designation)

:FILE:DIRectory:CDIRectory "\"

(Root directory designation)

:FILE:DIRectory:CDIRectory? -> :FILE:DIRectory:

CDIRectory "\Flash Mem\DIR1\DIR2"

Description • Data files cannot be saved to the root directory.

Specify a save destination drive for the save directory.

The following four drives are selectable.

- Internal memory: "Flash Mem"
- Network drive: "Network"
- PC card: "Storage Card<x>"
- USB storage device: "USB Storage<x>"

<x> = 1 to 4 (however, only a total of four "Storage Card" and "USB Storage" designations are supported (including partitions))

- Sets the specified directory the current directory for saving and loading.
- Absolute and relative path designations are possible.
- To specify an absolute path, enter a backslash at the front of the path.
- Relative path to higher level directories is not allowed.

:FILE[:DIRectory]:FREE?

Function Queries the free disk space in bytes on the specified storage medium.

Syntax :FILE[:DIRectory]:FREE?

Example :FILE:DIRectory:FREE?-> :FILE:DIRectory:FREE 65536

Description • Returns the size of the current directory.

- If the current directory is the root directory, "0" is returned.

:FILE[:DIRectory]:MDIRectory (Make Directory)

Function Creates a directory under the specified directory. This is an overlap command.

Syntax :FILE[:DIRectory]:MDIRectory {<String>}
<String> = Up to 259 characters

Example :FILE:DIRectory:MDIRectory "\Flash Mem\DIR1\DIR2"
(Absolute path designation)
:FILE:DIRectory:MDIRectory "DIR2"
(Relative path designation)

Description For details on the <String> parameter, see the description in FILE[:DIRectory]:CDIRectory.

:FILE:INTErnal?

Function Queries all settings related to the internal memory.

Syntax :FILE:INTErnal?

:FILE:INTErnal:RECall:SETEup[:EXECute]

Function Executes the loading of the setup data from the internal memory. This is an overlap command.

Syntax :FILE:INTErnal:RECall:SETEup[:EXECute] {<NRF>}
<NRF> = 1 to 12

Example :FILE:INTERNAL:RECALL:SETUP:EXECUTE 1

:FILE:INTErnal:STORE?

Function Queries all settings related to the saving to the internal memory.

Syntax :FILE:INTErnal:STORE?

:FILE:INTErnal:STORE:SETEup?

Function Queries all settings related to the saving of the setup data to the internal memory.

Syntax :FILE:INTErnal:STORE:SETEup?

5.11 FILE Group

:FILE:INTERNAL:STORE:SETUP:COMMENT<x>

Function Sets the comment to the setup data to be saved to the internal memory or queries the current setting.

Syntax :FILE:INTERNAL:STORE:SETUP:
COMMENT<x> {<String>}
:FILE:INTERNAL:STORE:SETUP:COMMENT<x>?
<x> = 1 to 12
<String> = Up to 16 characters

Example :FILE:INTERNAL:STORE:SETUP:
COMMENT1 "WAVE1"
:FILE:INTERNAL:STORE:SETUP:COMMENT1?
-> :FILE:INTERNAL:STORE:SETUP:
COMMENT1 "WAVE1"

:FILE:INTERNAL:STORE:SETUP:DATE<x>?

Function Queries the date/time when the setup data was saved to the internal memory.

Syntax :FILE:INTERNAL:STORE:SETUP:DATE<x>?
<x> = 1 to 12

Example :FILE:INTERNAL:STORE:SETUP:DATE1?
-> :FILE:INTERNAL:STORE:SETUP:
DATE1 "2007/01/12 14:58:02"

:FILE:INTERNAL:STORE:SETUP[:EXECUTE]

Function Executes the saving of the setup data to the internal memory. This is an overlap command.

Syntax :FILE:INTERNAL:STORE:SETUP
[:EXECUTE] {<Nrf>}
<Nrf> = 1 to 12

Example :FILE:INTERNAL:STORE:SETUP:EXECUTE 1

:FILE:INTERNAL:STORE:SETUP:LOCK<x>

Function Turns ON/OFF the read-only attribute of the setup data in the internal memory or queries the current setting.

Syntax :FILE:INTERNAL:STORE:SETUP:
LOCK<x> {<Boolean>}
:FILE:INTERNAL:STORE:SETUP:LOCK<x>?
<x> = 1 to 12

Example :FILE:INTERNAL:STORE:SETUP:LOCK1 ON
:FILE:INTERNAL:STORE:SETUP:LOCK1?
-> :FILE:INTERNAL:STORE:SETUP:LOCK1 1

:FILE:LOAD?

Function Queries all settings related to the loading of files on the specified storage medium.

Syntax :FILE:LOAD?

:FILE:LOAD:{BINARY|ZPOLYGON|ZWAVE}?

Function Queries all settings related to the loading of specific data.

Syntax :FILE:LOAD:{BINARY|ZPOLYGON|ZWAVE}?

:FILE:LOAD:{BINARY|MASK|SETUP|SNAP|SYMBOL|ZPOLYGON|ZWAVE}:ABORT

Function Aborts the loading of specific data.

Syntax :FILE:LOAD:{BINARY|MASK|SETUP|SNAP|
SYMBOL|ZPOLYGON|ZWAVE}:ABORT

Example (The following is an example for binary data.)
:FILE:LOAD:ABORT

:FILE:LOAD:{BINARY|MASK|SETUP|SNAP|SYMBOL|ZPOLYGON|ZWAVE}[:EXECUTE]

Function Executes the loading of specific data. This is an overlap command.

Syntax :FILE:LOAD:{BINARY|MASK|SETUP|SNAP|
SYMBOL|ZPOLYGON|ZWAVE}[:EXECUTE]
{<String>}
<String> = Up to 259 characters

Example (The following is an example for binary data.)
:FILE:LOAD:ABORT
EXECUTE "\Flash Mem\DIR\DATA"
(Absolute path designation)
:FILE:LOAD:ABORT:EXECUTE "DATA"
(Relative path designation)

Description For details on the <String> parameter, see the description in FILE[:DIRECTORY]:CDIRECTORY.

:FILE:LOAD:BINARy:REFERENCE

Function Sets the load destination of the binary data or queries the current setting.

Syntax :FILE:LOAD:BINARy:REFERENCE {<Nrf>|
ACQMemory}
:FILE:LOAD:BINARy:REFERENCE?
<Nrf> = 1 to 4

Example :FILE:LOAD:BINARy:REFERENCE 1
:FILE:LOAD:BINARy:REFERENCE? -> :FILE:
LOAD:BINARy:REFERENCE 1

:FILE:LOAD:{ZPOLYGON|ZWAVE}:ZONE

Function Sets the load destination of the zone data of specific data or queries the current setting.

Syntax :FILE:LOAD:{ZPOLYGON|ZWAVE}:
ZONE {<Nrf>}
:FILE:LOAD:{ZPOLYGON|ZWAVE}:ZONE?
<Nrf> = 1 to 4

Example (The following is an example for ZONE WAVE data.)
:FILE:LOAD:ZWAVE:ZONE 1
:FILE:LOAD:ZWAVE:ZONE? -> :FILE:LOAD:
ZWAVE:ZONE 1

:FILE:SAVE?

Function Queries all settings related to the saving of data.

Syntax :FILE:SAVE?

:FILE:SAVE:{AHistogram|AScii|BINary|FFT|FLOat|SBUS|ZWAVE}?

Function Queries all settings related to the saving of specific data.

Syntax :FILE:SAVE:{AHistogram|AScii|BINary|FFT|FLOat|SBUS|ZWAVE}?

:FILE:SAVE:{AHistogram|AScii|BINary|FFT|FLOat|SETup|SBUS|SNAP|WPARAMeter|ZWAVE}:ABORT

Function Aborts the save operation of specific data.

Syntax :FILE:SAVE:{AHistogram|AScii|BINary|FFT|FLOat|SETup|SBUS|SNAP|WPARAMeter|ZWAVE}:ABORT

Example (The following is an example for binary data.)
:FILE:SAVE:BINARY:ABORT

:FILE:SAVE:{AHistogram|AScii|BINary|FFT|FLOat|SETup|SBUS|SNAP|WPARAMeter|ZWAVE}[:EXECute]

Function Executes the saving of specific data by specifying a file name. This is an overlap command.

Syntax :FILE:SAVE:{AHistogram|AScii|BINary|FFT|FLOat|SETup|SBUS|SNAP|WPARAMeter|ZWAVE}[:EXECute] {<String>}
<String> = Up to 259 characters

Example (The following is an example for binary data.)
:FILE:SAVE:BINARY:EXECUTE
:FILE:SAVE:BINARY:
EXECUTE "\\Flash Mem\\DIR\\DATA"
(Absolute path designation)
:FILE:SAVE:BINARY:EXECUTE "DATA"
(Relative path designation)

Description • If the path is not specified, the data is saved to the file name specified by :FILE:SAVE:NAME.
• If the path is specified, the auto naming function is disabled.
• For details on the <String> parameter, see the description in FILE[:DIRectory]:CDIRectory.

:FILE:SAVE:{AHistogram|FFT|SBUS}:ANALysis

Function Sets the trace of specific data to be saved or queries the current setting.

Syntax FILE:SAVE:{AHistogram|FFT|SBUS}:ANALysis {<Nrf>}
FILE:SAVE:{AHistogram|FFT|SBUS}:ANALysis?
<Nrf> = 1 to 2

Example (The following is an example for FFT data.)
:FILE:SAVE:FFT:ANALYSIS 1
:FILE:SAVE:FFT:ANALYSIS? -> :FILE:SAVE:FFT:ANALYSIS 1

:FILE:SAVE:ANAMing

Function Sets the type of auto naming of file names of the saved data or queries the current setting.

Syntax :FILE:SAVE:ANAMing {DATE|NUMBer|OFF}
:FILE:SAVE:ANAMing?

Example :FILE:SAVE:ANAMING DATE
:FILE:SAVE:ANAMING? -> :FILE:SAVE:ANAMING DATE

:FILE:SAVE:{AScii|BINary|FLOat}:COMPRession

Function Sets the compression method for saving specific data or queries the current setting.

Syntax :FILE:SAVE:{AScii|BINary|FLOat}:COMPRession {DECimation|OFF|PTOPeak|STATe}
:FILE:SAVE:{AScii|BINary|FLOat}:COMPRession?

Example (The following is an example for binary data.)
:FILE:SAVE:BINARY:
COMPRESSION DECIMATION
:FILE:SAVE:BINARY:COMPRESSION?
-> :FILE:SAVE:BINARY:
COMPRESSION DECIMATION

Description {DECimation} is invalid if :FILE:SAVE:{AScii|BINary}:TRACE LOGic.
{STATe} is invalid for other than :FILE:SAVE:AScii:TRACE LOGic.

:FILE:SAVE:{AScii|BINary|FLOat}:HISTory

Function Sets whether to save the entire data or the selected data of specific data or queries the current setting.

Syntax :FILE:SAVE:{AScii|BINary|FLOat}:HISTory {ALL|ONE}
:FILE:SAVE:{AScii|BINary|FLOat}:HISTory?

Example (The following is an example for binary data.)
:FILE:SAVE:BINARY:HISTORY ALL
:FILE:SAVE:BINARY:HISTORY? -> :FILE:SAVE:BINARY:HISTORY ALL

:FILE:SAVE:{AScii|BINary|FLOat}:LENGth

Function Sets the size of waveform data to save for each type of data or queries the current setting.

Syntax :FILE:SAVE:{AScii|BINary|FLOat}:LENGth {<Nrf>}
:FILE:SAVE:{AScii|BINary|FLOat}:LENGth?
<Nrf> = See the main unit User's Manual.

Example (The following is an example with binary data.)
:FILE:SAVE:BINARY:LENGTH 2500
:FILE:SAVE:BINARY:LENGTH? -> :FILE:SAVE:BINARY:LENGTH 2500

5.11 FILE Group

:FILE:SAVE:ASCIi:RANGe

Function Sets the ASCII data saving range or queries the current setting.

Syntax :FILE:SAVE:ASCIi:RANGe {MAIN|Z1|Z2}
:FILE:SAVE:ASCIi:RANGe?

Example :FILE:SAVE:ASCIi:RANGe MAIN
:FILE:SAVE:ASCIi:RANGe?
-> :FILE:SAVE:ASCIi:RANGe MAIN

:FILE:SAVE:{ASCIi|BINary|FLOat}:TRACe

Function Sets the trace of specific data to be saved or queries the current setting.

Syntax :FILE:SAVE:{ASCIi|BINary|FLOat}:
TRACe {<NRf>|ALL|LOGic}
:FILE:SAVE:{ASCIi|BINary|FLOat}:TRACe?
<NRf> = 1 to 8

Example (The following is an example for binary data.)
:FILE:SAVE:BINary:TRACe 1
:FILE:SAVE:BINary:TRACe? -> :FILE:SAVE:
BINary:TRACe 1

Description You can only select {LOGic} on the DLM6000.
The source waveform {LOGic} is invalid if :FILE:
SAVE:{FLOat}:TRACe.

:FILE:SAVE:COMMeNt

Function Sets the comment of data to be saved or queries the current setting.

Syntax :FILE:SAVE:COMMeNt {<String>}
:FILE:SAVE:COMMeNt?
<String> = Up to 160 characters

Example :FILE:SAVE:COMMeNt "THIS IS TEST"
:FILE:SAVE:COMMeNt? -> :FILE:SAVE:
COMMeNt "THIS IS TEST"

:FILE:SAVE:NAME

Function Sets the name of the data file to be saved or queries the current setting.

Syntax :FILE:SAVE:NAME {<Filename>}
:FILE:SAVE:NAME?

Example :FILE:SAVE:NAME "SMAMPLE"
:FILE:SAVE:NAME? -> :FILE:SAVE:
NAME "SAMPLE"

:FILE:SAVE:ZWAVE:ZONE

Function Sets the zone of the zone data to be saved or queries the current setting.

Syntax :FILE:SAVE:ZWAVE:ZONE {<NRf>}
:FILE:SAVE:ZWAVE:ZONE?
<NRf> = 1 to 4

Example :FILE:SAVE:ZWAVE:ZONE 1
:FILE:SAVE:ZWAVE:ZONE? -> :FILE:SAVE:
ZWAVE:ZONE 1

5.12 GONogo Group

:GONogo?

Function Queries all settings related to GO/NO-GO determination.

Syntax :GONogo?

:GONogo:ABORT

Function Aborts the GO/NO-GO determination.

Syntax :GONogo:ABORT

Example :GONOGO:ABORT

:GONogo:ACTion?

Function Queries all settings related to the action taken when the determination result is NO-GO and the criteria values.

Syntax :GONogo:ACTion?

:GONogo:ACTion:BUZZer

Function Sets whether to sound a buzzer when the determination result is NO-GO or queries the current setting.

Syntax :GONogo:ACTion:BUZZer {<Boolean>}
:GONogo:ACTion:BUZZer?

Example :GONOGO:ACTION:BUZZER ON
:GONOGO:ACTION:BUZZER? -> :GONOGO:
ACTION:BUZZER 1

:GONogo:ACTion:HCOPY

Function Sets whether to print the screen image on the printer when the determination result is NO-GO or queries the current setting.

Syntax :GONogo:ACTion:HCOPY {<Boolean>}
:GONogo:ACTion:HCOPY?

Example :GONOGO:ACTION:HCOPY ON
:GONOGO:ACTION:HCOPY? -> :GONOGO:
ACTION:HCOPY 1

:GONogo:ACTion:MAIL?

Function Queries all settings related to the mail transmission when the determination is NO-GO.

Syntax :GONogo:ACTion:MAIL?

Example :GONOGO:ACTION:MAIL? -> :GONOGO:
ACTION:MAIL:INTERVAL 10;MODE 1

:GONogo:ACTion:MAIL:INTERval

Function Sets the interval at which to send mail when the determination is NO-GO or queries the current setting.

Syntax :GONogo:ACTion:MAIL:INTERval
{OFF|<NRf>}
:GONogo:ACTion:MAIL:INTERval?
<NRf> = 1 to 1440 (min)

Example :GONOGO:ACTION:MAIL:INTERVAL 10
:GONOGO:ACTION:MAIL:INTERVAL?
-> :GONOGO:ACTION:MAIL:INTERVAL 10

:GONogo:ACTion:MAIL:MODE

Function Sets whether to send mail when the determination is NO-GO or queries the current setting.

Syntax :GONogo:ACTion:MAIL:MODE {<Boolean>}
:GONogo:ACTion:MAIL:MODE?

Example :GONOGO:ACTION:MAIL:MODE ON
:GONOGO:ACTION:MAIL:MODE? -> :GONOGO:
ACTION:MAIL:MODE 1

:GONogo:ACTion:SAVE

Function Sets whether to save the waveform data to the storage medium when the determination result is NO-GO or queries the current setting.

Syntax :GONogo:ACTion:SAVE {<Boolean>}
:GONogo:ACTion:SAVE?

Example :GONOGO:ACTION:SAVE ON
:GONOGO:ACTION:SAVE? -> :GONOGO:ACTION:
SAVE 1

:GONogo:CONDition<x>

Function Sets the GO/NO-GO determination criteria or queries the current setting.

Syntax :GONogo:CONDition<x> {DONTcare|IN|OUT}
:GONogo:CONDition<x>?
<x> = 1 to 4

Example :GONOGO:CONDITION1 DONTCARE
:GONOGO:CONDITION1? -> :GONOGO:
CONDITION1 DONTCARE

:GONogo:COUNT?

Function Queries the actual number of GO/NO-GO determinations.

Syntax :GONogo:COUNT?

Example :GONOGO:COUNT? -> :GONOGO:COUNT 1

:GONogo:EXECute

Function Executes the GO/NO-GO determination. This is an overlap command.

Syntax :GONogo:EXECute

Example :GONOGO:EXECUTE

:GONogo:LOGic

Function Sets the GO/NO-GO determination logic or queries the current setting.

Syntax :GONogo:LOGic {AND|OR}
:GONogo:LOGic?

Example :GONOGO:LOGIC AND
:GONOGO:LOGIC? -> :GONOGO:LOGIC AND

5.12 GONogo Group

:GONogo:MODE

Function Sets the GO/NO-GO determination type or queries the current setting.

Syntax `GONogo:MODE {OFF|TELEcomtest|ZPARAMeter}`
`:GONogo:MODE?`

Example `GONOGO:MODE OFF`
`:GONOGO:MODE? -> :GONOGO:MODE OFF`

:GONogo:NGCount?

Function Queries the actual number of NO-GOs of the GO/NO-GO determination.

Syntax `:GONogo:NGCount?`

Example `:GONOGO:NGCOUNT? -> :GONOGO:NGCOUNT 1`

:GONogo:SCONdition? (Stop Condition)

Function Queries all settings related to the determination termination condition.

Syntax `:GONogo:SCONdition?`

:GONogo[:SCONdition]:NGCount

Function Sets the number of NO-GOs that terminates the GO/NO-GO determination or queries the current setting.

Syntax `:GONogo[:SCONdition]:NGCount {<NRf>|INFinite}`
`:GONogo[:SCONdition]:NGCount?`
`<NRf> = 1 to 1000`

Example `:GONOGO:SCONDITION:NGCOUNT 1`
`:GONOGO:SCONDITION:NGCOUNT? -> :GONOGO:SCONDITION:NGCOUNT 1`

:GONogo[:SCONdition]:STOPcount

Function Sets the acquisition count that terminates the GO/NO-GO determination or queries the current setting.

Syntax `:GONogo[:SCONdition]:STOPcount {<NRf>|INFinite}`
`:GONogo[:SCONdition]:STOPcount?`
`<NRf> = 1 to 1000000`

Example `:GONOGO:SCONDITION:STOPCOUNT 1`
`:GONOGO:SCONDITION:STOPCOUNT?`
`-> :GONOGO:SCONDITION:STOPCOUNT 1`

:GONogo:TELEcomtest?

Function Queries all settings related to mask test determination.

Syntax `:GONogo:TELEcomtest?`

:GONogo:TELEcomtest:SElect<x>?

Function Queries all settings related to the condition of the mask test determination.

Syntax `:GONogo:TELEcomtest:SElect<x>?`
`<x> = 1 to 4`

:GONogo:TELEcomtest:SElect<x>:

EYEPattern?

Function Queries all settings related to the eye pattern determination of the condition.

Syntax `:GONogo:TELEcomtest:SElect<x>:`
`EYEPattern?`
`<x> = 1 to 4`

:GONogo:TELEcomtest:SElect<x>:

EYEPattern:<Parameter>

Function Sets the upper and lower limits of the waveform parameter of the eye pattern determination or queries the current setting.

Syntax `:GONogo:TELEcomtest:SElect<x>:`
`EYEPattern:<Parameter> {<NRf>,<NRf>|<Voltage>,<Voltage>|<Current>,<Current>|<Time>,<Time>}`
`:GONogo:TELEcomtest:SElect<x>:`
`EYEPattern:<Parameter>?`
`<x> of SElect<x> = 1 to 4`
`<Parameter> = {DBERate|EHEight|EWIDth|FALL|JITter<y>|PCROssing|PDUTycycle|QFACTOR|RISE|SDBase|SDTop|T1CRossing|T2CRossing|VBase|VCrossing|VTop}`
`<NRf>,<Voltage>,<Current>,<Time> = See the DL6000/DLM6000 User's Manual (IM701331-01E).`
`<y> = 1 or 2`

Example The following is an example for DBERate.
`:GONOGO:TELECOMTEST:SELECT1:EYEPATTERN:DBERATE 1,2`
`:GONOGO:TELECOMTEST:SELECT1:EYEPATTERN:DBERATE? -> :GONOGO:TELECOMTEST:SELECT1:EYEPATTERN:DBERATE 2.000E+00,1.000E+00`

Description • For the relationship between communication commands and parameters used by the DL9500/DL9700, see appendix 4.
• For details on the parameters, See the DL6000/DLM6000 User's Manual (IM701331-01E).

:GONogo:TELEcomtest:SElect<x>:MASK?

Function Queries all settings related to the mask determination of the condition.

Syntax `:GONogo:TELEcomtest:SElect<x>:MASK?`
`<x> = 1 to 4`

:GONogo:TELEcomtest:SElect<x>:MASK:

ELEMent<x>?

Function Queries all settings related to the element used in the mask determination.

Syntax `:GONogo:TELEcomtest:SElect<x>:MASK:`
`ELEMent<x>?`
`<x> of SElect<x> = 1 to 4`
`<x> of ELEMent<x> = 1 to 4`

**:GONogo:TELEcomtest:SElect<x>:MASK:
ELEMENT<x>:PSPCount (Sample Point
Count %)**

Function Sets the upper and lower limits of the error rate for the number of sampled data points of the element or queries the current setting.

Syntax :GONogo:TELEcomtest:SElect<x>:MASK:
ELEMENT<x>:PSPCount {<Nrf>,<Nrf>}
:GONogo:TELEcomtest:SElect<x>:MASK:
ELEMENT<x>:PSPCount?
<x> of SElect<x> = 1 to 4
<x> of ELEMENT<x> = 1 to 4
<Nrf> = 0 to 100 (%)

Example :GONOGO:TELECOMTEST:SELECT1:MASK:
ELEMENT1:PSPCOUNT 1,2
:GONOGO:TELECOMTEST:SELECT1:MASK:
ELEMENT1:PSPCOUNT? -> :GONOGO:
TELECOMTEST:SELECT1:MASK:ELEMENT1:
PSPCOUNT 2.000E+00,1.000E+00

**:GONogo:TELEcomtest:SElect<x>:MASK:
ELEMENT<x>:PWCount (Wave Count %)**

Function Sets the upper and lower limits of the error rate for the number of acquisitions of the element or queries the current setting.

Syntax :GONogo:TELEcomtest:SElect<x>:MASK:
ELEMENT<x>:PWCount {<Nrf>,<Nrf>}
:GONogo:TELEcomtest:SElect<x>:MASK:
ELEMENT<x>:PWCount?
<x> of SElect<x> = 1 to 4
<x> of ELEMENT<x> = 1 to 4
<Nrf> = 0 to 100 (%)

Example :GONOGO:TELECOMTEST:SELECT1:MASK:
ELEMENT1:PWCOUNT 1,2
:GONOGO:TELECOMTEST:SELECT1:MASK:
ELEMENT1:PWCOUNT? -> :GONOGO:
TELECOMTEST:SELECT1:MASK:ELEMENT1:
PWCOUNT 2.000E+00,1.000E+00

**:GONogo:TELEcomtest:SElect<x>:MASK:
ELEMENT<x>:SPCount (Sample Point
Count)**

Function Sets the upper and lower limits of the number of sampled data points for the element that results in error or queries the current setting.

Syntax :GONogo:TELEcomtest:SElect<x>:MASK:E
LEMENT<x>:SPCount {<Nrf>,<Nrf>}
:GONogo:TELEcomtest:SElect<x>:MASK:
ELEMENT<x>:SPCount?
<x> of SElect<x> = 1 to 4
<x> of ELEMENT<x> = 1 to 4
<Nrf> = See the DL6000/DLM6000 User's Manual.

Example :GONOGO:TELECOMTEST:SELECT1:MASK:
ELEMENT1:SPCOUNT 1,2
:GONOGO:TELECOMTEST:SELECT1:MASK:
ELEMENT1:SPCOUNT? -> :GONOGO:
TELECOMTEST:SELECT1:MASK:ELEMENT1:
SPCOUNT 2.000E+00,1.000E+00

**:GONogo:TELEcomtest:SElect<x>:MASK:
ELEMENT<x>:WCount (Wave Count)**

Function Sets the upper and lower limits of the number of acquisitions for the element that results in error or queries the current setting.

Syntax :GONogo:TELEcomtest:SElect<x>:MASK:
ELEMENT<x>:WCount {<Nrf>,<Nrf>}
:GONogo:TELEcomtest:SElect<x>:MASK:
ELEMENT<x>:WCount?
<x> of SElect<x> = 1 to 4
<x> of ELEMENT<x> = 1 to 4
<Nrf> = See the DL6000/DLM6000 User's Manual.

Example :GONOGO:TELECOMTEST:SELECT1:MASK:
ELEMENT1:WCOUNT 1,2
:GONOGO:TELECOMTEST:SELECT1:MASK:
ELEMENT1:WCOUNT? -> :GONOGO:
TELECOMTEST:SELECT1:MASK:ELEMENT1:
WCOUNT 2.000E+00,1.000E+00

:GONogo:ZPARAMeter?

Function Queries all settings related to zone/parameter determination.

Syntax :GONogo:ZPARAMeter?

:GONogo:ZPARAMeter:SElect<x>?

Function Queries all settings related to the condition of the zone/parameter determination.

Syntax :GONogo:ZPARAMeter:SElect<x>?
<x> = 1 to 4

5.12 GONogo Group

:GONogo:ZPARAMeter:SElect<x>:MODE

Function Sets the mode of the condition or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:
MODE {PARAMeter|POLYgon|RECTangle|WAVE}
:GONogo:ZPARAMeter:SElect<x>:MODE?
<x> = 1 to 4

Example :GONOGO:ZPARAMETER:SELECT1:MODE WAVE
:GONOGO:ZPARAMETER:SELECT1:MODE?
-> :GONOGO:ZPARAMETER:SELECT1:MODE WAVE

:GONogo:ZPARAMeter:SElect<x>: PARAMeter?

Function Queries all settings related to the condition parameter.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter?
<x> = 1 to 4

:GONogo:ZPARAMeter:SElect<x>: PARAMeter:CATegory

Function Sets the parameter category or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
CATegory {FFT|MEASure|XY}
:GONogo:ZPARAMeter:SElect<x>:PARAMeter:
CATegory?
<x> = 1 to 4

Example :GONOGO:ZPARAMETER:SELECT1:PARAMETER:
CATEGORY FFT
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:
CATEGORY? -> :GONOGO:ZPARAMETER:
SELECT1:PARAMETER:CATEGORY FFT

Description This command is valid when :MEASURE:MODE
CYCLE.

:GONogo:ZPARAMeter:SElect<x>: PARAMeter:FFT<x>?

Function Queries all settings related to the FFT determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
FFT<x>?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2

:GONogo:ZPARAMeter:SElect<x>:

PARAMeter:FFT<x>:CALCulation<x>

Function Sets the upper and lower limits of the calculation item of the FFT determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
FFT<x>:CALCulation<x> {<NRF>,<NRF>}
:GONogo:ZPARAMeter:SElect<x>:PARAMeter:
FFT<x>:CALCulation<x>?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2
<x> of CALCulation<x> = 1 to 4
<NRF> = -4 to 4 (div)

Example GONOGO:ZPARAMETER:SELECT1:PARAMETER:
FFT1:CALCULATION1 0,1
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:
FFT1:CALCULATION1? -> :GONOGO:
ZPARAMETER:SELECT1:PARAMETER:
FFT1:CALCULATION1 1.000E+00,0.000E+00

:GONogo:ZPARAMeter:SElect<x>: PARAMeter:FFT<x>:PEAK?

Function Queries all settings related to the peak value of the FFT determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
FFT<x>:PEAK?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2

:GONogo:ZPARAMeter:SElect<x>: PARAMeter:FFT<x>:PEAK:DFREquency

Function Sets the upper and lower limits between the peak frequencies of the FFT determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
FFT<x>:PEAK:DFREquency {<Frequency>,
<Frequency>}
:GONogo:ZPARAMeter:SElect<x>:PARAMeter:
FFT<x>:PEAK:DFREquency?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2
<Frequency> = See the DL6000/DLM6000 User's
Manual

Example :GONOGO:ZPARAMETER:SELECT1:PARAMETER:
FFT1:PEAK:DFREQUENCY 0,1
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:
FFT1:PEAK:DFREQUENCY? -> :GONOGO:
ZPARAMETER:SELECT1:PARAMETER:FFT1:PEAK:
DFREQUENCY 1.000E+00,0.000E+00

:GONogo:ZPARAMeter:SElect<x>:**PARAMeter:FFT<x>:PEAK:DV**

Function Sets the upper and lower limits between the peak voltages of the FFT determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:FFT<x>:PEAK:DV {<NRf>,<NRf>}
:GONogo:ZPARAMeter:SElect<x>:PARAMeter:FFT<x>:PEAK:DV?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2
<NRf> = -4 to 4 (div)

Example :GONOGO:ZPARAMETER:SELECT1:PARAMETER:FFT1:PEAK:DV 0,1
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:FFT1:PEAK:DV? -> :GONOGO:ZPARAMETER:SELECT1:PARAMETER:FFT1:PEAK:DV 1.000E+00,0.000E+00

:GONogo:ZPARAMeter:SElect<x>:**PARAMeter:FFT<x>:PEAK:FREQuency<x>**

Function Sets the upper and lower limits of the peak frequency of the FFT determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:FFT<x>:PEAK:FREQuency<x> {<Frequency>,<Frequency>}
:GONogo:ZPARAMeter:SElect<x>:PARAMeter:FFT<x>:PEAK:FREQuency<x>?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2
<x> of FREQuency<x> = 1 or 2
<Frequency> = See the DL6000/DLM6000 User's Manual

Example :GONOGO:ZPARAMETER:SELECT1:PARAMETER:FFT1:PEAK:FREQUENCY1 0,1
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:FFT1:PEAK:FREQUENCY1? -> :GONOGO:ZPARAMETER:SELECT1:PARAMETER:FFT1:PEAK:FREQUENCY1 1.000E+00,0.000E+00

:GONogo:ZPARAMeter:SElect<x>:**PARAMeter:FFT<x>:PEAK:V<x>**

Function Sets the upper and lower limits of the peak voltage of the FFT determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:FFT<x>:PEAK:V<x> {<NRf>,<NRf>}
:GONogo:ZPARAMeter:SElect<x>:PARAMeter:FFT<x>:PEAK:V<x>?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2
<x> of V<x> = 1 or 2
<NRf> = -4 to 4 (div)

Example :GONOGO:ZPARAMETER:SELECT1:PARAMETER:FFT1:PEAK:V1 1,2
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:FFT1:PEAK:V1? -> :GONOGO:ZPARAMETER:SELECT1:PARAMETER:FFT1:PEAK:V1 2.000E+00,1.000E+00

:GONogo:ZPARAMeter:SElect<x>:**PARAMeter:MEASure?**

Function Queries all settings related to the determination using automated measurement of waveform parameters (measure determination).

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:MEASure?
<x> = 1 to 4

:GONogo:ZPARAMeter:SElect<x>:**PARAMeter:MEASure:BIT<x>?**

Function Queries all settings related to each logic bit of measure determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:MEASure:BIT<x>?
<x> of SElect<x> = 1 to 4
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)

:GONogo:ZPARAMeter:SElect<x>:**PARAMeter:MEASure:BIT<x>:AREA<x>?**

Function Queries all settings related to each area of measure determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:MEASure:BIT<x>:AREA<x>?
<x> of SElect<x> = 1 to 4
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2

Example :GONOGO:ZPARAMETER:SELECT1:PARAMETER:MEASURE:BIT1:AREA1?
-> :GONOGO:ZPARAMETER:SELECT1:PARAMETER:MEASURE:BIT1:AREA1:TYPE:COUNT 2.000E+00,1.000E+00

5.12 GONogo Group

**:GONogo:ZPARAMeter:SElect<x>:
PARAMeter:MEASure:BIT<x>:AREA<x>:TYPE?**

Function Queries all settings related to logic waveform parameters of measure determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:
PARAMeter:MEASure:BIT<x>:AREA<x>:TYPE?
<x> of BIT<x> = 1 to 4
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2

Example :GONOGO:ZPARAMETER:SELECT1:
PARAMETER:MEASURE:BIT1:AREA1:TYPE?
-> :GONOGO:ZPARAMETER:SELECT1:
PARAMETER:MEASURE:BIT1:AREA1:TYPE:
COUNT 2.000E+00,1.000E+00

**:GONogo:ZPARAMeter:SElect<x>:
PARAMeter:MEASure:BIT<x>:AREA<x>:TYPE:
<parameter>**

Function Sets the upper and lower limits of the logic waveform of measure determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:
PARAMeter:MEASure:BIT<x>:AREA<x>:
TYPE:<parameter> {<NRf>,<NRf>|
<time>,<time>|<frequency>,<frequency>}
:GONogo:ZPARAMeter:SElect<x>:
PARAMeter:MEASure:BIT<x>:AREA<x>:TYPE:
<parameter>
<x> of SElect<x> = 1 to 4
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2
<parameter>={AVGPeriod|DElay|DT|DUTYcycle|
ENUMber|FREQuency|NWIDTH|PERiod|
PWIDTH}
<NRf>, <time>, <frequency> = see main unit user's manual.

Example (The following is an example of the period with trace 1 area 1.)
:GONOGO:ZPARAMETER:SELECT1:
PARAMETER:MEASURE:BIT1:AREA1:TYPE:
PERIOD 1,2
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:
MEASURE:BIT1:AREA1:TYPE:PERIOD?
-> :GONOGO:ZPARAMETER:SELECT1:
PARAMETER:MEASURE:BIT1:AREA1:TYPE:
PERIOD 2.000E+00,1.000E+00

Description This command applies to cycle statistical processing when :MEASURE:MODE CYCLE.

**:GONogo:ZPARAMeter:SElect<x>:
PARAMeter:MEASure:CALCulation<x>**

Function Sets the upper and lower limits of the calculation item of the measure determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
MEASure:CALCulation<x> {<NRf>,<NRf>}
:GONogo:ZPARAMeter:SElect<x>:PARAMeter:
MEASure:CALCulation<x>?
<x> of SElect<x> = 1 to 4
<x> of CALCulation<x> = 1 to 4
<NRf> = -4 to 4 (div)

Example :GONOGO:ZPARAMETER:SELECT1:PARAMETER:
MEASURE:CALCULATION1 1,2
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:
MEASURE:CALCULATION1? -> :GONOGO:
ZPARAMETER:SELECT1:PARAMETER:MEASURE:
CALCULATION1 2.000E+00,1.000E+00

**:GONogo:ZPARAMeter:SElect<x>:
PARAMeter:MEASure:STATistics**

Function Sets the statistical value of the measure determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
MEASure:STATistics {MAXimum|MEAN|
MINimum|SIGMa}
:GONogo:ZPARAMeter:SElect<x>:PARAMeter:
MEASure:STATistics?
<x> = 1 to 4

Example :GONOGO:ZPARAMETER:SELECT1:PARAMETER:
MEASURE:STATISTICS MAXIMUM
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:
MEASURE:STATISTICS? -> :GONOGO:
ZPARAMETER:SELECT1:PARAMETER:
MEASURE:STATISTICS MAXIMUM

Description This command is valid when :MEASURE:MODE CYCLE.

**:GONogo:ZPARAMeter:SElect<x>:
PARAMeter:MEASure:TRACe<x>?**

Function Queries all settings related to the trace of the measure determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
MEASure:TRACe<x>?
<x> of SElect<x> = 1 to 4
<x> of TRACe<x> = 1 to 8

:GONogo:ZPARAMeter:SElect<x>:

PARAMeter:MEASure:TRACe<x>:AREA<x>?

Function Queries all settings related to the area of the measure determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
MEASure:TRACe<x>:AREA<x>?
<x> of SElect<x> = 1 to 4
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

:GONogo:ZPARAMeter:SElect<x>:

PARAMeter:MEASure:TRACe<x>:AREA<x>:

TYPE?

Function Queries all settings related to the waveform parameters of the measure determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
MEASure:TRACe<x>:AREA<x>:TYPE?
<x> of SElect<x> = 1 to 4
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

:GONogo:ZPARAMeter:SElect<x>:

PARAMeter:MEASure:TRACe<x>:AREA<x>:

TYPE:<Parameter>

Function Sets the upper and lower limits of the waveform parameter of the measure determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
MEASure:TRACe<x>:AREA<x>:TYPE:
<Parameter> {<NRf>,<NRf>|
<Voltage>,<Voltage>|
<Current>,<Current>|<Time>,<Time>|
<Frequency>,<Frequency>}
:GONogo:ZPARAMeter:SElect<x>:PARAMeter:
MEASure:TRACe<x>:AREA<x>:TYPE:
<Parameter>?

<x> of SElect<x> = 1 to 4

<x> of TRACe<x> = 1 to 8

<x> of AREA<x> = 1 or 2

<Parameter> = {AVGPeriod|BURSt|CMEan|CRMS|
CSDeviAtion|DElay|DT|DUTYcycle|ENUMber|FALL|
FREQuency|HIGH|HILow|LOW|MAXimum|MEAN|
MINimum|NOVershoot|NWIDth|PERiod|POVershoot|
PTOPeak|PWIDth|RISE|RMS|SDEViAtion|TYCInteg|
TYINteg|V1|V2}

<NRf>, <Voltage>, <Current>, <Time>, and

<Frequency> = See the DL6000/DLM6000 User's Manual.

Example (The following is an example for the maximum value of trace 1 and area 1.)

```
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:
MEASURE:TRACE1:AREA1:TYPE:MAXIMUM 1,2
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:
MEASURE:TRACE1:AREA1:TYPE:MAXIMUM?
-> :GONOGO:ZPARAMETER:SELECT1:
PARAMETER:MEASURE:TRACE1:AREA1:TYPE:
MAXIMUM 2.000E+00,1.000E+00
```

Description This command applies to cycle statistical processing when :MEASURE:MODE CYCLE.

:GONogo:ZPARAMeter:SElect<x>:

PARAMeter:XY<x>?

Function Queries all settings related to the XY determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:
XY<x>?
<x> of SElect<x> = 1 to 4
<x> of XY<x> = 1 or 2

5.12 GONogo Group

:GONogo:ZPARAMeter:SElect<x>:

PARAMeter:XY<x>:XYINteg

Function Sets the upper and lower limits integral value of the XY determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:PARAMeter:XY<x>:XYINteg {<NRf>,<NRf>}
:GONogo:ZPARAMeter:SElect<x>:PARAMeter:XY<x>:XYINteg?
<x> of SElect<x> = 1 to 4
<x> of XY<x> = 1 or 2
<NRf> = -4 to 4 (div)

Example :GONOGO:ZPARAMETER:SELECT1:PARAMETER:XY1:XYINTEG 1,2
:GONOGO:ZPARAMETER:SELECT1:PARAMETER:XY1:XYINTEG? -> :GONOGO:ZPARAMETER:SELECT1:PARAMETER:XY1:XYINTEG 2.000E+00,1.000E+00

:GONogo:ZPARAMeter:SElect<x>:

RECTangle?

Function Queries all settings related to the rectangle determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:RECTangle?
<x> = 1 to 4

:GONogo:ZPARAMeter:SElect<x>:

RECTangle:HORizontal

Function Sets the horizontal position of the rectangle used in the rectangle determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:RECTangle:HORizontal {<NRf>,<NRf>}
:GONogo:ZPARAMeter:SElect<x>:RECTangle:HORizontal?
<x> = 1 to 4
<NRf> = -5 to 5 div

Example :GONOGO:ZPARAMETER:SELECT1:RECTANGLE:HORIZONTAL 0,1
:GONOGO:ZPARAMETER:SELECT1:RECTANGLE:HORIZONTAL? -> :GONOGO:ZPARAMETER:SELECT1:RECTANGLE:HORIZONTAL 1.000E+00,0.000E+00

:GONogo:ZPARAMeter:SElect<x>:

RECTangle:VERTical

Function Sets the vertical position of the rectangle used in the rectangle determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:RECTangle:VERTical {<NRf>,<NRf>}
:GONogo:ZPARAMeter:SElect<x>:RECTangle:VERTical?
<x> = 1 to 4
<NRf> = -4 to 4 (div)

Example :GONOGO:ZPARAMETER:SELECT1:RECTANGLE:VERTICAL 0,1
:GONOGO:ZPARAMETER:SELECT1:RECTANGLE:VERTICAL? -> :GONOGO:ZPARAMETER:SELECT1:RECTANGLE:VERTICAL 1.000E+00,0.000E+00

:GONogo:ZPARAMeter:SElect<x>:TRACe

Function Sets the source trace of the zone/parameter determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:TRACe {<NRf>}
:GONogo:ZPARAMeter:SElect<x>:TRACe?
<x> = 1 to 4
<NRf> = 1 to 8

Example :GONOGO:ZPARAMETER:SELECT1:TRACE 1
:GONOGO:ZPARAMETER:SELECT1:TRACE?
-> :GONOGO:ZPARAMETER:SELECT1:TRACE 1

:GONogo:ZPARAMeter:SElect<x>:WAVE?

Function Queries all settings related to the wave determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:WAVE?
<x> = 1 to 4

:GONogo:ZPARAMeter:SElect<x>:WAVE:

EDIT<x>:EXIT

Function Exits the edit menu of the wave determination zone.

Syntax :GONogo:ZPARAMeter:SElect<x>:WAVE:EDIT<x>:EXIT {<NRf>|QUIT}
<x> of SElect<x> = 1 to 4
<x> of EDIT<x> = 1 to 13 (1 to 8 are traces and 9 to 13 are internal memories)
<NRf> = 1 to 4 (internal memories)

Example :GONOGO:ZPARAMETER:SELECT1:WAVE:EDIT1:EXIT 1

Description • An error occurs if this command is issued when the zone is not being edited.

- Saves the zone waveform to the internal memory specified by <NRf>.

**:GONogo:ZPARAMeter:SElect<x>:WAVE:
EDIT<x>:PART**

Function Editing the portion of the zone of the wave determination.

Syntax :GONogo:ZPARAMeter:SElect<x>:WAVE:
EDIT<x>:PART {<NRf>,<NRf>,<NRf>,<NRf>}
<x> of SElect<x> = 1 to 4
<x> of EDIT<x> = 1 to 13 (1 to 8 are traces. 9 to 12 are internal memories. 13 is the zone waveform that is currently displayed)
<NRf> = -5 to 5 (div: partial editing time axis cursor 1 and 2)
-8 to 8 (div: up and down) (in the order partial editing time axis cursor 1, 2, ↑, and ↓)

Example :GONOGO:ZPARAMETER:SELECT1:WAVE:EDIT1:
PART 1,2,3,4

Description The amount of movement upward or downward is a relative value with respect to the zone waveform that is currently displayed.

**:GONogo:ZPARAMeter:SElect<x>:WAVE:
EDIT<x>:WHOLe**

Function Sets the editing of the entire zone of the waveform zone.

Syntax :GONogo:ZPARAMeter:SElect<x>:WAVE:
EDIT<x>:WHOLe {<NRf>,<NRf>,<NRf>,<NRf>}
<x> of SElect<x> = 1 to 4
<x> of EDIT<x> = 1 to 13 (1 to 8 are traces. 9 to 12 are internal memories. 13 is the zone waveform that is currently displayed)
<NRf> = 0 to 5 (div: left and right)
0 to 8 (div: up and down)
(In the order ←, →, ↑, and ↓)

Example :GONOGO:ZPARAMETER:SELECT1:WAVE:EDIT1:
WHOLe 1,2,3,4

Description The amount of movement is a relative value with respect to the reference waveform.

**:GONogo:ZPARAMeter:SElect<x>:WAVE:
TRANge**

Function Sets the determination range of the zone determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:WAVE:
TRANge {<NRf>,<NRf>}
:GONogo:ZPARAMeter:SElect<x>:WAVE:
TRANge?
<x> = 1 to 4
<NRf> = -5 to 5 (div)

Example :GONOGO:ZPARAMETER:SELECT1:WAVE:
TRANge 1,2
:GONOGO:ZPARAMETER:SELECT1:WAVE:TRANge?
-> :GONOGO:ZPARAMETER:SELECT1:WAVE:
TRANge 2.000E+00,1.000E+00

:GONogo:ZPARAMeter:SElect<x>:WINDow

Function Sets the source window of the zone determination or queries the current setting.

Syntax :GONogo:ZPARAMeter:SElect<x>:WINDow
{MAIN|XY1|XY2|Z1|Z2}
:GONogo:ZPARAMeter:SElect<x>:WINDow?
<x> = 1 to 4

Example :GONOGO:ZPARAMETER:SELECT1:WINDow MAIN
:GONOGO:ZPARAMETER:SELECT1:WINDow?
-> :GONOGO:ZPARAMETER:SELECT1:
WINDow MAIN

5.13 HCOpy Group

:HCOpy? (Hard COPY)

Function Queries all settings related to the output of screen data.

Syntax :HCOpy?

:HCOpy:ABORt

Function Aborts data output and paper feeding.

Syntax :HCOpy:ABORt

Example :HCOpy:ABORT

Description This command is valid for :HCOpy:DIRectio
EXTPrinter|PRINter.

:HCOpy:DIRectio

Function Sets the data output destination or queries the current setting.

Syntax :HCOpy:DIRectio {EXTPrinter|FILE|
NETPrint|PRINter}
:HCOpy:DIRectio?

Example :HCOpy:DIRECTION EXTPRINTER
:HCOpy:DIRECTION? -> :HCOpy:DIRECTION
EXTPRINTER

:HCOpy:EXECute

Function Executes the data output. This is an overlap command.

Syntax :HCOpy:EXECute {<String>}
<String> = Up to 259 characters

Example :HCOpy:EXECUTE
:HCOpy:EXECUTE "\Flash Mem\DIR\DATA"
(Absolute path designation)
:HCOpy:EXECUTE "DATA"
(Relative path designation)

Description • If the path is not specified, the data is saved to the
file name specified by :HCOpy:FILE:SAVE:NAME.
• If the path is specified, the auto naming function is
disabled.
• For details on the <String> parameter, see the
description in :HCOpy:FILE:SAVE:CDIRectory.

:HCOpy:EXTPrinter?

Function Queries all settings related to the external printer
output.

Syntax :HCOpy:EXTPrinter?

:HCOpy:EXTPrinter:TONE

Function Sets the half tone of the external printer output or
queries the current setting.

Syntax :HCOpy:EXTPrinter:TONE {<Boolean>}
:HCOpy:EXTPrinter:TONE?

Example :HCOpy:EXTPRINTER:TONE ON
:HCOpy:EXTPRINTER:TONE? -> :HCOpy:
EXTPRINTER:TONE 1

:HCOpy:EXTPrinter:TYPE

Function Sets the type of output commands to send to the
external printer or queries the current setting.

Syntax :HCOpy:EXTPrinter:TYPE {EINKjet|
HINKjet}
:HCOpy:EXTPrinter:TYPE?

Example :HCOpy:EXTPRINTER:TYPE EINKJET
:HCOpy:EXTPRINTER:TYPE? -> :HCOpy:
EXTPRINTER:TYPE EINKJET

:HCOpy:FILE?

Function Queries all settings related to file output.

Syntax :HCOpy:FILE?

:HCOpy:FILE:FORMat

Function Sets the file output image format or queries the
current setting.

Syntax :HCOpy:FILE:FORMat {BMP|JPEG|PNG}
:HCOpy:FILE:FORMat?

Example :HCOpy:FILE:FORMAT BMP
:HCOpy:FILE:FORMAT? -> :HCOpy:FILE:
FORMAT BMP

:HCOpy:FILE:SAVE?

Function Queries all settings related to the saving of file output.

Syntax :HCOpy:FILE:SAVE?

:HCOpy:FILE:SAVE:ANAMing

Function Sets the type of auto naming of save destination file
names or queries the current setting.

Syntax :HCOpy:FILE:SAVE:ANAMing {DATE|
NUMBering|OFF}
:HCOpy:FILE:SAVE:ANAMing?

Example :HCOpy:FILE:SAVE:ANAMING DATE
:HCOpy:FILE:SAVE:ANAMING? -> :HCOpy:
FILE:SAVE:ANAMING DATE

:HCOpy:FILE:SAVE:CDIRECTory (Change Directory)

Function Sets the save destination directory name or queries the current setting.

Syntax :HCOpy:FILE:SAVE:CDIRECTory {<String>}
:HCOpy:FILE:SAVE:CDIRECTory?

<String> = Up to 259 characters

Example :HCOpy:FILE:SAVE:CDIRECTORY "\Flash
Mem\DIR1\DIR2"
(Absolute path designation)
:HCOpy:FILE:SAVE:CDIRECTORY "DIR2"
(Relative path designation)
:HCOpy:FILE:SAVE:CDIRECTORY "\"
(Root directory designation)
:HCOpy:FILE:SAVE:CDIRECTORY? -> :HCOpy:
FILE:SAVE:
CDIRECTORY "\Flash Mem\DIR1\DIR2"

Description • Data files cannot be saved to the root directory. Specify a save destination drive for the current directory.
The following four drives are selectable.

- Internal memory: "Flash Mem"
- Network drive: "Network"
- PC card: "Storage Card<x>"
- USB storage device: "USB Storage<x>"

<x> = 1 to 4 (however, only a total of four "Storage Card" and "USB Storage" designations are supported (including partitions))

- Sets the specified directory the current directory for saving and loading.
- Absolute and relative path designations are possible.
- To specify an absolute path, enter a backslash at the front of the path.
- Relative path to higher level directories is not allowed.

:HCOpy:FILE:SAVE:NAME

Function Sets the save destination file name or queries the current setting.

Syntax :HCOpy:FILE:SAVE:NAME <Filename>
:HCOpy:FILE:SAVE:NAME?

Example :HCOpy:FILE:SAVE:NAME "SAMPLE"
:HCOpy:FILE:SAVE:NAME? -> :HCOpy:FILE:
SAVE:NAME "SAMPLE"

:HCOpy:NETPrint?

Function Queries all settings related to network printer output or queries the current setting.

Syntax :HCOpy:NETPrint?

:HCOpy:NETPrint:TONE

Function Sets the half tone for the network printer or queries the current setting.

Syntax :HCOpy:NETPrint:TONE {<Boolean>}
:HCOpy:NETPrint:TONE?

Example :HCOpy:NETPRINT:TONE ON
:HCOpy:NETPRINT:TONE? -> :HCOpy:
NETPRINT:TONE 1

Description Cannot be turned {ON} when :HCOpy:NETPrint:TYPE HLASer is used.

:HCOpy:NETPrint:TYPE

Function Sets the output command type for the network printer or queries the current setting.

Syntax :HCOpy:NETPrint:TYPE {HINKjet|HLASer}
:HCOpy:NETPrint:TYPE?

Example :HCOpy:NETPRINT:TYPE HINKJET
:HCOpy:NETPRINT:TYPE? -> :HCOpy:
NETPRINT:TYPE HINKJET

:HCOpy:PRINter?

Function Queries all settings related to the built-in printer output.

Syntax :HCOpy:PRINter?

:HCOpy:PRINter:HRMode

Function Turns ON/OFF the high resolution mode of the built-in printer output or queries the current setting.

Syntax :HCOpy:PRINter:HRMode {<Boolean>}
:HCOpy:PRINter:HRMode?

Example :HCOpy:PRINTER:HRMODE ON
:HCOpy:PRINTER:HRMODE? -> :HCOpy:
PRINTER:HRMODE 1

5.14 HISTory Group

:HISTory?

Function Queries all settings related to the history function.
Syntax :HISTory?

:HISTory:CURRent?

Function Queries all settings related to the history function of the current waveform (CH1 to 4, M1 to 8).
Syntax :HISTory:CURRent?

:HISTory[:CURRent]:DISPlay

Function Sets the start number and end number of the display record of the history waveform or queries the current setting.

Syntax :HISTory[:CURRent]:DISPlay
{<NRf>,<NRf>}
:HISTory[:CURRent]:DISPlay?
<NRf> = See the DL6000/DLM6000 User's Manual.
Example :HISTORY:CURRENT:DISPLAY 0,-10
:HISTORY:CURRENT:DISPLAY? -> :HISTORY:
CURRENT:DISPLAY 0,-10

:HISTory[:CURRent]:DMODE (Display Mode)

Function Sets the display mode of the history waveform or queries the current setting.

Syntax :HISTory[:CURRent]:DMODE {ACOLor|
AHTone|AINTensity|ONE}
:HISTory[:CURRent]:DMODE?
Example :HISTORY:CURRENT:DMODE ONE
:HISTORY:CURRENT:DMODE? -> :HISTORY:
CURRENT:DMODE ONE

:HISTory[:CURRent]:MODE

Function Sets the highlight display mode of the history waveform or queries the current setting.

Syntax :HISTory[:CURRent]:MODE {AVERage|
RECORD}
:HISTory[:CURRent]:MODE?
Example :HISTORY:CURRENT:MODE RECORD
:HISTORY:CURRENT:MODE? -> :HISTORY:
CURRENT:MODE RECORD

:HISTory[:CURRent]:RECORD

Function Sets the target record of the history waveform or queries the current setting.

Syntax :HISTory[:CURRent]:RECORD
{<NRf>|MINimum}
:HISTory[:CURRent]:RECORD?
<NRf> = See the DL6000/DLM6000 User's Manual.
Example :HISTORY:CURRENT:RECORD 0
:HISTORY:CURRENT:RECORD? -> :HISTORY:
CURRENT:RECORD 0

Description Specifying MINimum sets the record to the minimum record number.

:HISTory[:CURRent]:RECORD? MINimum

Function Queries the minimum record number of the history waveform.

Syntax :HISTory[:CURRent]:RECORD? MINimum
Example :HISTORY:CURRENT:RECORD? MINIMUM
-> :HISTORY:CURRENT:RECORD -1

Description Specifying MINimum sets the record to the minimum record number.

:HISTory[:CURRent]:REPLay?

Function Queries all settings related to the replay function of the history function.

Syntax :HISTory[:CURRent]:REPLay?
Example :HISTORY:CURRENT:REPLAY? -> :HISTORY:
CURRENT:REPLAY:SPEED 1

:HISTory[:CURRent]:REPLay:JUMP

Function Jumps the history waveform to the specified record number.

Syntax :HISTory[:CURRent]:REPLay:JUMP
{MAXimum|MINimum}
Example :HISTORY:CURRENT:REPLAY:JUMP MAXIMUM

:HISTory[:CURRent]:REPLay:SPEEd

Function Sets the replay speed of the history waveform or queries the current setting.

Syntax :HISTory[:CURRent]:REPLay:SPEEd {<NRf>|
PER3|PER10|PER30|PER60}
:HISTory[:CURRent]:REPLay:SPEEd?
<NRf> = 1, 3, 10
Example :HISTORY:CURRENT:REPLAY:SPEED 1
:HISTORY:CURRENT:REPLAY:SPEED?
-> :HISTORY:CURRENT:REPLAY:SPEED 1

:HISTory[:CURRENT]:REPLay:START

Function Starts the replay of the history waveform in the specified direction.

Syntax :HISTory[:CURRENT]:REPLay:
START {MAXimum|MINimum}

Example :HISTORY:CURRENT:REPLAY:START MAXIMUM

:HISTory[:CURRENT]:REPLay:STOP

Function Stops the replay of the history waveform.

Syntax :HISTory[:CURRENT]:REPLay:STOP

Example :HISTORY:CURRENT:REPLAY:STOP

:HISTory[:CURRENT]:SEARCH?

Function Queries all settings related to the history search function.

Syntax :HISTory[:CURRENT]:SEARCH?

:HISTory[:CURRENT][:SEARCH]:ABORT

Function Aborts the history search.

Syntax :HISTory[:CURRENT][:SEARCH]:ABORT

Example :HISTORY:CURRENT:SEARCH:ABORT

:HISTory[:CURRENT][:SEARCH]:EXECute

Function Executes the history search. This is an overlap command.

Syntax :HISTory[:CURRENT][:SEARCH]:EXECute

Example :HISTORY:CURRENT:SEARCH:EXECUTE

:HISTory[:CURRENT][:SEARCH]:LOGic

Function Sets the history search logic or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:LOGic {AND|
OR}
:HISTory[:CURRENT][:SEARCH]:LOGic?

Example :HISTORY:CURRENT:SEARCH:LOGIC AND
:HISTORY:CURRENT:SEARCH:LOGIC?
-> :HISTORY:CURRENT:SEARCH:LOGIC AND

:HISTory[:CURRENT][:SEARCH]:RESet

Function Resets the search conditions of the history search.

Syntax :HISTory[:CURRENT][:SEARCH]:RESet

Example :HISTORY:CURRENT:SEARCH:RESET

**:HISTory[:CURRENT][:SEARCH]:
SElect<x>?**

Function Queries all settings related to the history search condition.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>?
<x> = 1 to 4

:HISTory[:CURRENT][:SEARCH]:**SElect<x>:CONDition**

Function Sets determination criteria of the history search condition or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
CONDition {DONTcare|IN|OUT}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
CONDition?
<x> = 1 to 4

Example :HISTORY:CURRENT:SEARCH:SELECT1:
CONDITION IN
:HISTORY:CURRENT:SEARCH:SELECT1:
CONDITION? -> :HISTORY:CURRENT:SEARCH:
SELECT1:CONDITION IN

:HISTory[:CURRENT][:SEARCH]:**SElect<x>:MODE**

Function Sets the mode of the history search condition or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
MODE {PARAMeter|POLYgon|RECTangle|WAVE}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
MODE?
<x> = 1 to 4

Example :HISTORY:CURRENT:SEARCH:SELECT1:
MODE WAVE
:HISTORY:CURRENT:SEARCH:SELECT1:MODE?
-> :HISTORY:CURRENT:SEARCH:SELECT1:
MODE WAVE

:HISTory[:CURRENT][:SEARCH]:**SElect<x>:PARAMeter?**

Function Queries all settings related to the parameter of the history search condition.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter?
<x> = 1 to 4

:HISTory[:CURRENT][:SEARCH]:**SElect<x>:PARAMeter:CATEgory**

Function Sets the parameter category or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:CATEgory {FFT|MEASure|XY}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:CATEgory?
<x> = 1 to 4

Example :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:CATEGORY MEASURE
:HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:CATEGORY? -> :HISTORY:
CURRENT:SEARCH:SELECT1:PARAMETER:
CATEGORY MEASURE

5.14 HISTory Group

:HISTory[:CURRENT][:SEARCH]:SElect<x>:PARAMeter:FFT<x>?

Function Queries all settings related to the FFT search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2

:HISTory[:CURRENT][:SEARCH]:SElect<x>:PARAMeter:FFT<x>:CALCulation<x>

Function Sets the upper and lower limits of the calculation item of the FFT search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>:
CALCulation<x> {<NRf>,<NRf>}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>:CALCulation<x>?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2
<x> of CALCulation<x> = 1 to 4
<NRf> = See the DL6000/DLM6000 User's Manual.

Example :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:CALCULATION1 1,2
:HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:CALCULATION1?
-> :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:CALCULATION1 2.000E+00,
1.000E+00

:HISTory[:CURRENT][:SEARCH]:SElect<x>:PARAMeter:FFT<x>:PEAK?

Function Queries all settings related to the peak value of the FFT search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>:PEAK?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2

:HISTory[:CURRENT][:SEARCH]:SElect<x>:PARAMeter:FFT<x>:PEAK:DFREquency

Function Sets the upper and lower limits between the peak frequencies of the FFT search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>:PEAK:DFREquency {<Frequency>,<Frequency>}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>:PEAK:DFREquency?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2

<Frequency> = See the DL6000/DLM6000 User's Manual

Example :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:PEAK:DFREQUENCY 1,10
:HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:PEAK:DFREQUENCY?
-> :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:PEAK:
DFREQUENCY 10.00E+00,1.000E+00

:HISTory[:CURRENT][:SEARCH]:SElect<x>:PARAMeter:FFT<x>:PEAK:DV

Function Sets the upper and lower limits between the peak voltages of the FFT search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>:PEAK:DV {<NRf>,<NRf>}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>:PEAK:DV?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2
<NRf> = -4 to 4 (div)

Example :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:PEAK:DV 1,2
:HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:PEAK:DV? -> :HISTORY:
CURRENT:SEARCH:SELECT1:PARAMETER:FFT1:
PEAK:DV 2.000E+00,1.000E+00

**:HISTory[:CURRENT][:SEARCH]:
SElect<x>:PARAMeter:FFT<x>:PEAK:
FREquency<x>**

Function Sets the upper and lower limits of the peak frequency of the FFT search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>:PEAK:FREquency<x>
{<Frequency>,<Frequency>}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>:PEAK:FREquency<x>?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2
<x> of FREquency<x> = 1 or 2
<Frequency> = See the DL6000/DLM6000 User's Manual

Example :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:PEAK:FREQUENCY1 1,2
:HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:PEAK:FREQUENCY1?
-> :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:PEAK:
FREQUENCY1 2.000E+00,1.000E+00

**:HISTory[:CURRENT][:SEARCH]:
SElect<x>:PARAMeter:FFT<x>:PEAK:V<x>**

Function Sets the upper and lower limits of the peak voltage of the FFT search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>:PEAK:V<x>
{<NRf>,<NRf>}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:FFT<x>:PEAK:V<x>?
<x> of SElect<x> = 1 to 4
<x> of FFT<x> = 1 or 2
<x> of V<x> = 1 or 2
<NRf> = -4 to 4 (div)

Example :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:PEAK:V1 1,2
:HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:FFT1:PEAK:V1? -> :HISTORY:
CURRENT:SEARCH:SELECT1:PARAMETER:FFT1:
PEAK:V1 2.000E+00,1.000E+00

**:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:MEASure**

Function Queries all settings related to the search using automated measurement of waveform parameters (measure search).

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:MEASure?
<x> = 1 to 4

**:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:MEASure:BIT<x>?**

Function Queries all settings related to each logic bit of measure search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:MEASure:BIT<x>?
<x> of SElect<x> = 1 to 4
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)

**:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:MEASure:BIT<x>:AREA<x>?**

Function Queries all settings related to each area of measure search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:MEASure:BIT<x>:AREA<x>?
<x> of SElect<x> = 1 to 4
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2

**:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:MEASure:BIT<x>:AREA<x>:TYPE?**

Function Queries all settings related to logic waveform parameters of measure search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAMeter:MEASure:BIT<x>:AREA<x>:TYPE?
<x> of SElect<x> = 1 to 4
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2

5.14 HISTory Group

**:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAmeter:MEASure:BIT<x>:AREA<x>:
TYPE:<parameter>**

Function Sets the upper and lower limits of the logic waveform of measure search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAmeter:MEASure:BIT<x>:AREA<x>:
TYPE:<parameter> {(<NRf>,<NRf>)|
(<time>,<time>)|
(<frequency>,<frequency>)}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAmeter:MEASure:BIT<x>:AREA<x>:
TYPE:<parameter>?
<x> of SElect<x> = 1 to 4
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can
set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2
<parameter>={AVGPeriod|DElay|DT|DUTYcycle|
ENUMber|FREQuency|NWIDTH|PERiod|
PWIDth}
<NRf>, <time>, <frequency> = see main unit user's
manual.

Example (The following is an example of the period with trace
1 area 1.)

```
:HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:MEASURE:BIT1:AREA1:TYPE:
PERIOD 0,1
: HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:MEASURE:BIT1:AREA1:TYPE:
PERIOD?
-> :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:MEASURE:BIT1:AREA1:TYPE:
PERIOD 1.000E+00,0.000E+00
```

**:HISTory[:CURRENT][:SEARCH]:
SElect<x>:PARAmeter:MEASure:
CALCulation<x>**

Function Sets the upper and lower limits of the calculation item of the measure search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAmeter:MEASure:
CALCulation<x> {<NRf>,<NRf>}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAmeter:MEASure:CALCulation<x>?
<x> of SElect<x> = 1 to 4
<x> of CALCulation<x> = 1 to 4
<NRf> = -4 to 4 (div)

Example :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:MEASURE:CALCULATION1 1,2
: HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:MEASURE:CALCULATION1?
-> :HISTORY:CURRENT:SEARCH:SELECT1:
PARAMETER:MEASURE:
CALCULATION1 2.000E+00,1.000E+00

**:HISTory[:CURRENT][:SEARCH]:
SElect<x>:PARAmeter:MEASure:
TRACe<x>?**

Function Queries all settings related to the trace of the measure search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAmeter:MEASure:TRACe<x>?
<x> of SElect<x> = 1 to 4
<x> of TRACe<x> = 1 to 8

**:HISTory[:CURRENT][:SEARCH]:
SElect<x>:PARAmeter:MEASure:
TRACe<x>:AREA<x>?**

Function Queries all settings related to the area of the measure search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAmeter:MEASure:TRACe<x>:AREA<x>?
<x> of SElect<x> = 1 to 4
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

**:HISTory[:CURRENT][:SEARCH]:
SElect<x>:PARAmeter:MEASure:
TRACe<x>:AREA<x>:TYPE?**

Function Queries all settings related to the waveform parameters of the measure search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
PARAmeter:MEASure:TRACe<x>:AREA<x>:
TYPE?
<x> of SElect<x> = 1 to 4
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

:HISTory[:CURRENT][:SEARCH]:
SElect<x>:PARAMeter:MEASure:
TRACe<x>:AREA<x>:TYPE:<Parameter>

Function Sets the upper and lower limits of the waveform parameter of the measure search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
 PARAMeter:MEASure:TRACe<x>:AREA<x>:
 TYPE:<Parameter> {(<NRf>,<NRf>)|
 (<Voltage>,<Voltage>)|
 (<Current>,<Current>)|(<Time>,<Time>)|
 (<Frequency>,<Frequency>)}
 :HISTory[:CURRENT][:SEARCH]:SElect<x>:
 PARAMeter:MEASure:TRACe<x>:AREA<x>:
 TYPE:<Parameter>?
 <x> of SElect<x> = 1 to 4
 <x> of TRACe<x> = 1 to 8
 <x> of AREA<x> = 1 or 2
 <Parameter> = {AVGPeriod|BURSt|CMEan|CRMS|
 CSDeviation|DElay|DT|DUTYcycle|ENUMber|FALL|
 FREQuency|HIGH|HILow|LOW|MAXimum|MEAN|
 MINimum|NOVershoot|NWIDth|PERiod|POVershoot|
 PTOPeak|PWIDTH|RISE|RMS|SDEViation|TYCInteg|
 TYINteg|V1|V2}
 <NRf>, <Voltage>, <Current>, <Time>, and
 <Frequency> = See the DL6000/DLM6000 User's
 Manual.

Example (The following is an example for the maximum value
 of trace 1 and area 1.)
 :HISTORY:CURRENT:SEARCH:SELECT1:
 PARAMETER:MEASURE:TRACE1:AREA1:TYPE:
 MAXIMUM 0,1
 :HISTORY:CURRENT:SEARCH:SELECT1:
 PARAMETER:MEASURE:TRACE1:AREA1:TYPE:
 MAXIMUM? -> :HISTORY:CURRENT:SEARCH:
 SELECT1:PARAMETER:MEASURE:TRACE1:AREA1:
 TYPE:MAXIMUM 1.000E+00,0.000E+00

:HISTory[:CURRENT][:SEARCH]:
SElect<x>:PARAMeter:XY<x>?

Function Queries all settings related to the XY search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
 PARAMeter:XY<x>?
 <x> of SElect<x> = 1 to 4
 <x> of XY<x> = 1 or 2

:HISTory[:CURRENT][:SEARCH]:
SElect<x>:PARAMeter:XY<x>:XYINteg

Function Sets the upper and lower limits integral value of the XY search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
 PARAMeter:XY<x>:XYINteg {<NRf>,<NRf>}
 :HISTory[:CURRENT][:SEARCH]:SElect<x>:
 PARAMeter:XY<x>:XYINteg?
 <x> of SElect<x> = 1 to 4
 <x> of XY<x> = 1 or 2
 <NRf> = -4 to 4 (div)

Example :HISTORY:CURRENT:SEARCH:SELECT1:
 PARAMETER:XY1:XYINTEG 1,2
 :HISTORY:CURRENT:SEARCH:SELECT1:
 PARAMETER:XY1:XYINTEG? -> :HISTORY:
 CURRENT:SEARCH:SELECT1:
 PARAMETER:XY1:
 XYINTEG 2.000E+00,1.000E+00

:HISTory[:CURRENT][:SEARCH]:
SElect<x>:RECTangle?

Function Queries all settings related to the rectangle search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
 RECTangle?
 <x> = 1 to 4

:HISTory[:CURRENT][:SEARCH]:
SElect<x>:RECTangle:HORizontal

Function Sets the horizontal position of the rectangle used in the rectangle search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
 RECTangle:HORizontal {<NRf>,<NRf>}
 :HISTory[:CURRENT][:SEARCH]:SElect<x>:
 RECTangle:HORizontal?
 <x> = 1 to 4
 <NRf> = -5 to 5 (div)

Example :HISTORY:CURRENT:SEARCH:SELECT1:
 RECTANGLE:HORIZONTAL 1,2
 :HISTORY:CURRENT:SEARCH:SELECT1:
 RECTANGLE:HORIZONTAL? -> :HISTORY:
 CURRENT:SEARCH:SELECT1:
 RECTANGLE:HORIZONTAL 2.000E+00,
 1.000E+00

5.14 HISTory Group

:HISTory[:CURRENT][:SEARCH]: SElect<x>:RECTangle:VERTical

Function Sets the vertical position of the rectangle used in the rectangle search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
RECTangle:VERTical {<NRf>,<NRf>}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
RECTangle:VERTical?
<x> = 1 to 4
<NRf> = -4 to 4 (div)

Example :HISTORY:CURRENT:SEARCH:SELECT1:
RECTANGLE:VERTICAL 1,2
:HISTORY:CURRENT:SEARCH:SELECT1:
RECTANGLE:VERTICAL? -> :HISTORY:
CURRENT:SEARCH:SELECT1:RECTANGLE:
VERTICAL 2.000E+00,1.000E+00

:HISTory[:CURRENT][:SEARCH]: SElect<x>:TRACe

Function Sets the source trace of the history search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
TRACe {<NRf>}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
TRACe?
<x> = 1 to 4
<NRf> = 1 to 8

Example :HISTORY:CURRENT:SEARCH:SELECT1:TRACE 1
:HISTORY:CURRENT:SEARCH:SELECT1:TRACE?
-> :HISTORY:CURRENT:SEARCH:SELECT1:
TRACE 1

Description This command is invalid when Window is XY.

:HISTory[:CURRENT][:SEARCH]: SElect<x>:WAVE?

Function Queries all settings related to the search in the waveform zone (wave search).

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
WAVE?
<x> = 1 to 4

:HISTory[:CURRENT][:SEARCH]: SElect<x>:WAVE:EDIT<x>:EXIT

Function Exits the zone edit menu of the wave search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
WAVE:EDIT<x>:EXIT {<NRf>|QUIT}
<x> of SElect<x> = 1 to 4
<x> of EDIT<x> = 1 to 13
<NRf> = 1 to 4 (internal memories)

Example :HISTORY:CURRENT:SEARCH:SELECT1:WAVE:
EDIT1:EXIT 1

Description • An error occurs if this command is issued when the zone is not being edited.
• Saves the zone waveform to the internal memory specified by <NRf>.

:HISTory[:CURRENT][:SEARCH]: SElect<x>:WAVE:EDIT<x>:PART

Function Sets the editing of the portion of the zone of the wave search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
WAVE:EDIT<x>:PART {<NRf>,<NRf>,<NRf>,<NRf>}
<x> of SElect<x> = 1 to 4
<x> of EDIT<x> = 1 to 13 (1 to 8 are traces. 9 to 12 are internal memories. 13 is the zone waveform that is currently displayed)
<NRf> = -5 to 5 (div: partial editing time axis cursor 1 and 2)
-8 to 8 (div: up and down) (in the order partial editing time axis cursor 1, 2, ↑, and ↓)

Example :HISTORY:CURRENT:SEARCH:SELECT1:WAVE:
EDIT1:PART 1,2,3,4

Description The amount of movement upward or downward is a relative value with respect to the zone waveform that is currently displayed.

:HISTory[:CURRENT][:SEARCH]: SElect<x>:WAVE:EDIT<x>:WHOLe

Function Sets the editing of the entire zone of the wave search.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
WAVE:EDIT<x>:
WHOLe {<NRf>,<NRf>,<NRf>,<NRf>}
<x> of SElect<x> = 1 to 4
<x> of EDIT<x> = 1 to 13 (1 to 8 are traces. 9 to 12 are internal memories. 13 is the zone waveform that is currently displayed)
<NRf> = 0 to 5 (div: left and right)
0 to 8 (div: up and down)
(In the order ←, →, ↑, and ↓)

Example :HISTORY:CURRENT:SEARCH:SELECT1:WAVE:
EDIT1:WHOLE 1,2,3,4

Description The amount of movement is a relative value with respect to the reference waveform.

:HISTory[:CURRENT][:SEARCH]: SElect<x>:WAVE:TRANge

Function Sets the range over which to perform the wave search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
WAVE:TRANge {<NRf>,<NRf>}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
WAVE:TRANge?
<x> = 1 to 4
<NRf> = -5 to 5 (div)

Example :HISTORY:CURRENT:SEARCH:SELECT1:WAVE:
TRANGE 1,2
:HISTORY:CURRENT:SEARCH:SELECT1:WAVE:
TRANGE? -> :HISTORY:CURRENT:SEARCH:
SELECT1:WAVE:TRANGE 2.000E+00,1.000E+00

:HISTory[:CURRENT][:SEARCH]:**SElect<x>:WINDOW**

Function Sets the source window of the history search or queries the current setting.

Syntax :HISTory[:CURRENT][:SEARCH]:SElect<x>:
WINDOW {MAIN|XY1|XY2|Z1|Z2}
:HISTory[:CURRENT][:SEARCH]:SElect<x>:
WINDOW?
<x> = 1 to 4

Example :HISTORY:CURRENT:SEARCH:SELECT1:
WINDOW MAIN
:HISTORY:CURRENT:SEARCH:SELECT1:WINDOW?
-> :HISTORY:CURRENT:SEARCH:SELECT1:
WINDOW MAIN

Description XY1 and XY2 are valid only for a rectangular or a polygon.

:HISTory[:CURRENT]:TIME?

Function Queries the time of the source record number of the history waveform.

Syntax :HISTory[:CURRENT]:TIME? {<NRF>|
MINimum}

Example :HISTORY:CURRENT:TIME? -1 -> :HISTORY:
CURRENT:TIME "-1 10:20:30.10"

Description Specifying MINimum sets the record to the minimum record number.

:HISTory:REference<x>?

Function Queries all settings related to the history function of the reference.

Syntax :HISTory:REference<x>?
<x> = 1 to 4

:HISTory:REference<x>:DMODE (Display Mode)

Function Sets the display mode of the history waveform of the reference or queries the current setting.

Syntax :HISTory:REference<x>:DMODE {ACOLor|
AHTone|AINTensity|ONE}
:HISTory:REference<x>:DMODE?
<x> = 1 to 4

Example :HISTORY:REFERENCE1:DMODE ACOLOR
:HISTORY:REFERENCE1:DMODE? -> :HISTORY:
REFERENCE1:DMODE ACOLOR

:HISTory:REference<x>:MODE

Function Sets the highlight display mode of the history waveform of the reference or queries the current setting.

Syntax :HISTory:REference<x>:MODE {AVERAge|
RECORD}
:HISTory:REference<x>:MODE?
<x> = 1 to 4

Example :HISTORY:REFERENCE1:MODE AVERAGE
:HISTORY:REFERENCE1:MODE? -> :HISTORY:
REFERENCE1:MODE AVERAGE

:HISTory:REference<x>:RECORD

Function Sets the source record of the history waveform of the reference or queries the current setting.

Syntax :HISTory:REference<x>:RECORD {<NRF>|
MINimum}
:HISTory:REference<x>:RECORD?
<x> = 1 to 4
<NRF> = See the DL6000/DLM6000 User's Manual.

Example :HISTORY:REFERENCE1:RECORD 1
:HISTORY:REFERENCE1:RECORD?
-> :HISTORY:REFERENCE1:RECORD 1

:HISTory:REference<x>:RECORD? MINimum

Function Queries the minimum record number of the history waveform of the reference.

Syntax :HISTory:REference<x>:RECORD? {MINimum}
<x> = 1 to 4

Example :HISTORY:REFERENCE1:RECORD? MINIMUM
-> :HISTORY:REFERENCE1:RECORD -1

Description Specifying MINimum sets the record to the minimum record number.

:HISTory:REference<x>:REPLay?

Function Queries all settings related to the replay function of the history function of the reference.

Syntax :HISTory:REference<x>:REPLay?
<x> = 1 to 4

Example :HISTORY:REFERENCE1:REPLAY?
-> :HISTORY:REFERENCE1:REPLAY:SPEED 1

:HISTory:REference<x>:REPLay:JUMP

Function Jumps to the specified record number of the history waveform of the reference.

Syntax :HISTory:REference<x>:REPLay:
JUMP {MAXimum|MINimum}
<x> = 1 to 4

Example :HISTORY:REFERENCE1:REPLAY:JUMP MAXIMUM

:HISTory:REference<x>:REPLay:SPEEd

Function Sets the replay speed of the history waveform of the reference or queries the current setting.

Syntax :HISTory:REference<x>:REPLay:SPEEd
{<NRF>|PER3|PER10|PER30|PER60}
:HISTory:REference<x>:REPLay:SPEEd?
<x> = 1 to 4
<NRF> = 1,3,10

Example :HISTORY:REFERENCE1:REPLAY:SPEED 1
:HISTORY:REFERENCE1:REPLAY:SPEED?
-> :HISTORY:REFERENCE1:REPLAY:SPEED 1

5.14 HISTory Group

:HISTory:REference<x>:REPLay:START

Function Starts the replay of the history waveform of the reference.

Syntax :HISTory:REference<x>:REPLay:START
{MAXimum|MINimum}
<x> = 1 to 4

Example :HISTORY:REFERENCE1:REPLAY:START
MAXIMUM

:HISTory:REference<x>:REPLay:STOP

Function Stops the replay of the history waveform of the reference.

Syntax :HISTory:REference<x>:REPLay:STOP
<x> = 1 to 4

Example :HISTORY:REFERENCE1:REPLAY:STOP

:HISTory:REference<x>:TIME?

Function Queries the time of the source record number of the reference waveform.

Syntax :HISTory:REference<x>:TIME? {<NRf>|
MINimum}
<x> = 1 to 4

Example :HISTORY:REFERENCE1:TIME? -1
-> :HISTORY:REFERENCE1:
TIME "-1 10:20:30.10"

Description Specifying MINimum sets the record to the minimum record number.

5.15 IMAGE Group

: IMAGE?

Function Queries all settings related to the output of screen image data.

Syntax : IMAGE?

: IMAGE: FORMAt

Function Sets the output format of the screen image data or queries the current setting.

Syntax : IMAGE:FORMAt {BMP|JPEG|PNG}
: IMAGE:FORMAt?

Example : IMAGE:FORMAT BMP
: IMAGE:FORMAT? -> : IMAGE:FORMAT BMP

: IMAGE: SEND?

Function Queries the screen image data.

Syntax : IMAGE:SEND?

Example : IMAGE:SEND? -> #6 (number of bytes, 6 digits) (data
byte sequence) (block data)

Description For details on <Block data>, see page 4-6.

: IMAGE: TONE

Function Sets the tone of the screen image data or queries the current setting.

Syntax : IMAGE:TONE {COLoR|GRAY|OFF|REVerse}
: IMAGE:TONE?

Example : IMAGE:TONE COLOR
: IMAGE:TONE? -> : IMAGE:TONE COLOR

Description If ": IMAGE:FORMAt JPEG" is specified, OFF cannot be selected.

5.16 INITialize Group

:INITialize:EXECute

Function Execute the initialization.

Syntax :INITialize:EXECute

Example :INITIALIZE:EXECUTE

:INITialize:UNDO

Function Cancels the initialization that was executed.

Syntax :INITialize:UNDO

Example :INITIALIZE:UNDO

5.17 LOGic Group

:LOGic?

Function Queries all settings related to the logic.
Syntax :LOGic?

:LOGic:AWINdow?

Function Queries all settings related to analog waveform display.
Syntax :LOGic:AWINdow?
Example :LOGIC:AWINDOW?
-> :LOGIC:AWINDOW:DISPLAY 1;RATIO 50

:LOGic:AWINdow[:DISPlay]

Function Turns ON/OFF the analog waveform display or queries the current setting.
Syntax :LOGic:AWINdow[:DISPlay] {<Boolean>}
:LOGic:AWINdow[:DISPlay]?
Example :LOGIC:AWINDOW:DISPLAY ON
:LOGIC:AWINDOW:DISPLAY?
-> :LOGIC:AWINDOW:DISPLAY 1

:LOGic:AWINdow:RATio

Function Sets the analog waveform display ratio or queries the current setting.
Syntax :LOGic:AWINdow:RATio {<NRf>}
:LOGic:AWINdow:RATio?
<NRf>=25(%),50(%),75(%)
Example :LOGIC:AWINDOW:RATIO 25
:LOGIC:AWINDOW:RATIO?
-> :LOGIC:AWINDOW:RATIO 25

:LOGic:DESKew

Function Sets the skew correction of the logic signal or queries the current setting.
Syntax :LOGic:DESKew {<Time>}
:LOGic:DESKew?
<Time> = -80 to 80 ns in 10-ps steps
Example :LOGIC:DESKEW 1NS
:LOGIC:DESKEW?
-> :LOGIC:DESKEW 1.000E-09

:LOGic:GROup<x>?

Function Queries all settings related to the logic group.
Syntax :LOGic:GROup<x>?
<x> = 1 to 5

:LOGic:GROup<x>:BUNDle?

Function Queries all settings related to the bundle of the logic group.
Syntax :LOGic:GROup<x>:BUNDle?
<x> = 1 to 5

:LOGic:GROup<x>:BUNDle:FORMat

Function Sets the display format (bus display) of the bundled value of the logic group or queries the current setting.
Syntax :LOGic:GROup<x>:BUNDle:
FORMat {BINary|HEXa|SYMBol}
:LOGic:GROup<x>:BUNDle:FORMat?
<x> = 1 to 5
Example :LOGIC:GROUP1:BUNDLE:FORMAT HEXA
:LOGIC:GROUP1:BUNDLE:FORMAT? -> :LOGIC:
GROUP1:BUNDLE:FORMAT HEXA

:LOGic:GROup<x>:BUNDle:MODE

Function Sets the bundle mode of the logic group or queries the current setting.
Syntax :LOGic:GROup<x>:BUNDle:MODE {<Boolean>}
:LOGic:GROup<x>:BUNDle:MODE?
<x> = 1 to 5
Example :LOGIC:GROUP1:BUNDLE:MODE ON
:LOGIC:GROUP1:BUNDLE:MODE? -> :LOGIC:
GROUP1:BUNDLE:MODE 1

:LOGic:GROup<x>:BUNDle:SYMBol

Function Sets the symbol item of the bundle value of each logic group.
Syntax :LOGic:GROup<x>:BUNDle:
SYMBol {<string>,<Boolean>}
<x> = 1 to 5
<string> = 16 characters or fewer
Example :LOGIC:GROUP1:BUNDLE:SYMBOL "TEST",ON

:LOGic:GROup<x>:DISPlay

Function Turns ON/OFF the display of the logic group or queries the current setting.
Syntax :LOGic:GROup<x>:DISPlay {<Boolean>}
:LOGic:GROup<x>:DISPlay?
<x> = 1 to 5
Example :LOGIC:GROUP1:DISPLAY ON
:LOGIC:GROUP1:DISPLAY? -> :LOGIC:
GROUP1:DISPLAY 1

5.17 LOGic Group

:LOGic:GROup<x>:MAPPING

Function Sets the bit mapping of the logic group or queries the current setting.

Syntax :LOGic:GROup<x>:MAPPING {<String>}
:LOGic:GROup<x>:MAPPING?
<x> = 1 to 5
<String> = Up to 64 characters by combining "A0" to "A7," "B0" to "B7," "C0" to "C7," and "D0" to "D7."
(On 16-bit models, <string> is a combination of "A0-A7" and "C0-C7" of up to 32 characters)

Example :LOGIC:GROUP1:MAPPING
"A7A6A5A4B3B2B1B0C7C6C5C4D3D2D1D0"
:LOGIC:GROUP1:MAPPING? -> :LOGIC:
GROUP1:MAPPING
"A7A6A5A4B3B2B1B0C7C6C5C4D3D2D1D0"

:LOGic:GROup<x>:ORDer

Function Sets the displayed order of the logic group or queries the current setting.

Syntax :LOGic:GROup<x>:ORDer {<NRf>}
:LOGic:GROup<x>:ORDer?
<x> = 1 to 5
<NRf> = 1 to 5

Example :LOGIC:GROUP1:ORDER 1
:LOGIC:GROUP1:ORDER? -> :LOGIC:GROUP1:
ORDER 1

:LOGic:GROup<x>:STATe

Function Turns ON/OFF the state display of the logic group or queries the current setting.

Syntax :LOGic:GROup<x>:STATe {<Boolean>}
:LOGic:GROup<x>:STATe?
<x> = 1 to 5

Example :LOGIC:GROUP1:STATE ON
:LOGIC:GROUP1:STATE? -> :LOGIC:GROUP1:
STATE 1

:LOGic:LABel?

Function Queries all settings related to the label of the logic signal.

Syntax :LOGic:LABel?

:LOGic:LABel:BNAME?

Function Queries all settings related to the bit name of the logic signal.

Syntax :LOGic:LABel:BNAME?

:LOGic:LABel:BNAME: {A<x>|B<x>|C<x>|D<x>}

Function Sets the bit name of the logic signal or queries the current setting.

Syntax :LOGic:LABel:BNAME: {A<x>|B<x>|C<x>|D<x>} {<String>}
:LOGic:LABel:BNAME: {A<x>|B<x>|C<x>|D<x>}?
<x> = 0 to 7
<String> = Up to 8 characters

Example :LOGIC:LABEL:BNAME:A0 "NO_1"
:LOGIC:LABEL:BNAME:A0? -> :LOGIC:LABEL:
BNAME:A0 "NO_1"

Description On 16-bit models, you can only select {A<y>|C<y>}.

:LOGic:LABel:LNAME?

Function Queries all settings related to the group name of the logic signal.

Syntax :LOGic:LABel:LNAME?

:LOGic:LABel:LNAME:GROup<x>

Function Sets the group name of the logic signal or queries the current setting.

Syntax :LOGic:LABel:LNAME:GROup<x> {<String>}
:LOGic:LABel:LNAME:GROup<x>?
<x> = 1 to 5
<String> = Up to 8 characters

Example :LOGIC:LABEL:LNAME:GROUP1 "NO_1"
:LOGIC:LABEL:LNAME:GROUP1? -> :LOGIC:
LABEL:LNAME:GROUP1 "NO_1"

:LOGic:LABel:MODE

Function Turns ON/OFF the logic signal label or queries the current setting.

Syntax :LOGic:LABel:MODE {<Boolean>}
:LOGic:LABel:MODE?

Example :LOGIC:LABEL:MODE ON
:LOGIC:LABEL:MODE? -> :LOGIC:LABEL:
MODE 1

:LOGic:MODE

Function Turns ON/OFF the logic signal or queries the current setting.

Syntax :LOGic:MODE {<Boolean>}
:LOGic:MODE?

Example :LOGIC:MODE ON
:LOGIC:MODE? -> :LOGIC:MODE 1

:LOGic:POSition

Function Sets the vertical position of the logic signal or queries the current setting.

Syntax :LOGic:POSition {<NRf>}
:LOGic:POSition?
<NRf> = -25 to 31

Example :LOGIC:POSITION 0
:LOGIC:POSITION? -> :LOGIC:POSITION 0

:LOGic:SCLock?

Function Queries all settings related to the state clock of the logic signal.

Syntax :LOGic:SCLock?

:LOGic:SCLock:POLarity

Function Sets the state clock polarity of the logic signal or queries the current setting.

Syntax :LOGic:SCLock:POLarity {BOTH|FALL|RISE}
:LOGic:SCLock:POLarity?

Example :LOGIC:SCLOCK:POLARITY BOTH
:LOGIC:SCLOCK:POLARITY? -> :LOGIC:
SCLOCK:POLARITY BOTH

:LOGic:SCLock:SOURce

Function Sets the state clock source of the logic signal or queries the current setting.

Syntax :LOGic:SCLock:SOURce {A<x>|B<x>|
C<x>|D<x>}
:LOGic:SCLock:SOURce?
<x> = 0 to 7

Example :LOGIC:SCLOCK:SOURCE A0
:LOGIC:SCLOCK:SOURCE? -> :LOGIC:SCLOCK:
SOURCE A0

Description On 16-bit models, you can only select {A<y>|C<y>}.

:LOGic:SIZE

Function Sets the display size of the logic signal or queries the current setting.

Syntax :LOGic:SIZE {LARGe|MIDium|SMALl|
XLARGe|XSMall}
:LOGic:SIZE?

Example :LOGIC:SIZE LARGE
:LOGIC:SIZE? -> :LOGIC:SIZE LARGE

:LOGic:THReshold?

Function Queries all settings related to the threshold level of the logic signal.

Syntax :LOGic:THReshold?

:LOGic:THReshold: {PODA|PODB|PODC|PODD}?

Function Queries all settings related to the threshold level of the specified pod (port).

Syntax :LOGic:THReshold: {PODA|PODB|PODC|PODD}?

Example :LOGIC:THRESHOLD:PODA? -> :LOGIC:
THRESHOLD:PODA:TYPE CMOS5;
USERLEVEL 0.000E+00

Description On 16-bit models, you can only select {PODA|PODC}.

:LOGic:THReshold: {PODA|PODB|PODC|PODD}:TYPE

Function Sets the type of threshold level of the specified pod (port) or queries the current setting.

Syntax :LOGic:THReshold: {PODA|PODB|PODC|PODD}:
TYPE {CMOS1|CMOS2|CMOS3|CMOS5|ECL|USER}
:LOGic:THReshold: {PODA|PODB|PODC|PODD}:
TYPE?

Example :LOGIC:THRESHOLD:PODA:TYPE CMOS1
:LOGIC:THRESHOLD:PODA:TYPE? -> :LOGIC:
THRESHOLD:PODA:TYPE CMOS1

Description On 16-bit models, you can only select {PODA|PODC}.

:LOGic:THReshold: {PODA|PODB|PODC|PODD}:USERlevel

Function Sets the threshold level of the specified pod (port) or queries the current setting.

Syntax :LOGic:THReshold: {PODA|PODB|PODC|PODD}
:USERlevel {<Voltage>}
:LOGic:THReshold: {PODA|PODB|PODC|PODD}
:USERlevel?

<Voltage> = -10 to 10 V in 0.1-V steps

Example :LOGIC:THRESHOLD:PODA:USERLEVEL 1V
:LOGIC:THRESHOLD:PODA:USERLEVEL?
-> :LOGIC:THRESHOLD:PODA:
USERLEVEL 1.0E+00

Description On 16-bit models, you can only select {PODA|PODC}.

5.18 MATH Group

:MATH<x>?

Function Queries all settings related to the computation.

Syntax :MATH<x>?
<x> = 1 to 4

:MATH<x>:DA?

Function Queries all settings related to the D/A conversion.

Syntax :MATH<x>:DA?
<x> = 1 to 4

:MATH<x>:DA:ARAnging

Function Executes the auto range of the D/A conversion.

Syntax :MATH<x>:DA:ARAnging
<x> = 1 to 4

Example :MATH1:DA:ARANGING

:MATH<x>:DA:BFOFormat

Function Sets the binary format of D/A conversion or queries the current setting.

Syntax :MATH<x>:DA:BFOFormat {SBINary|
TComplement}
:MATH<x>:DA:BFOFormat?
<x> = 1 to 4

Example :MATH1:DA:BFORMAT SBINARY
:MATH1:DA:BFORMAT? -> :MATH1:DA:
BFORMAT SBINARY

:MATH<x>:DA:HISTory:ABORt

Function Aborts the history computation of the D/A conversion.

Syntax :MATH<x>:DA:HISTory:ABORt
<x> = 1 to 4

Example :MATH1:DA:HISTORY:ABORT

:MATH<x>:DA:HISTory:EXECute

Function Executes the auto range of the D/A conversion.

Syntax :MATH<x>:DA:HISTory:EXECute
<x> = 1 to 4

Example :MATH1:DA:HISTORY:EXECUTE

:MATH<x>:DA:RESCaling?

Function Queries all settings related to the rescaling of the D/A conversion.

Syntax :MATH<x>:DA:RESCaling?
<x> = 1 to 4

:MATH<x>:DA:RESCaling:AVALue

Function Sets rescaling coefficient A of the D/A conversion or queries the current setting.

Syntax :MATH<x>:DA:RESCaling:AVALue {<NRf>}
:MATH<x>:DA:RESCaling:AVALue?
<x> = 1 to 4
<NRf> = -1.0000E+31 to 1.0000E+31

Example :MATH1:DA:RESCALING:AVALUE 1
:MATH1:DA:RESCALING:AVALUE? -> :MATH1:
DA:RESCALING:AVALUE 1.000E+00

:MATH<x>:DA:RESCaling:BVALue

Function Sets rescaling offset B of the D/A conversion or queries the current setting.

Syntax :MATH<x>:DA:RESCaling:BVALue {<NRf>}
:MATH<x>:DA:RESCaling:BVALue?
<x> = 1 to 4
<NRf> = -1.0000E+31 to 1.0000E+31

Example :MATH1:DA:RESCALING:BVALUE 1
:MATH1:DA:RESCALING:BVALUE? -> :MATH1:
DA:RESCALING:BVALUE 1.000E+00

:MATH<x>:ECOUNT?

Function Queries all settings related to the edge count computation.

Syntax :MATH<x>:ECOUNT?
<x> = 1 to 4

Example :MATH1:ECOUNT? -> :MATH1:ECOUNT:
HYSTERESIS 1.000E+00;POLARITY RISE

:MATH<x>:ECOUNT:HYSTEResis

Function Sets the hysteresis of the edge detection level of the edge count computation or queries the current setting.

Syntax :MATH<x>:ECOUNT:HYSTEResis {<NRf>}
:MATH<x>:ECOUNT:HYSTEResis?
<x> = 1 to 4
<NRf> = 0 to 4 (div)

Example :MATH1:ECOUNT:HYSTERESIS 1
:MATH1:ECOUNT:HYSTERESIS? -> :MATH1:
ECOUNT:HYSTERESIS 1.000E+00

:MATH<x>:ECOUNT:POLarity

Function Sets the edge detection polarity of the edge count computation or queries the current setting.

Syntax :MATH<x>:ECOUNT:POLarity {FALL|RISE}
:MATH<x>:ECOUNT:POLarity?
<x> = 1 to 4

Example :MATH1:ECOUNT:POLARITY RISE
:MATH1:ECOUNT:POLARITY? -> :MATH1:
ECOUNT:POLARITY RISE

:MATH<x>:FILTer?

Function Queries all settings related to the filter.

Syntax :MATH<x>:FILTer?
<x> = 1 to 4

:MATH<x>:FILTer:DELay?

Function Queries all settings related to the delay computation.

Syntax :MATH<x>:FILTer:DELay?
<x> = 1 to 4

:MATH<x>:FILTER:DELAY:TIME

Function Sets the delay value of the delay computation or queries the current setting.

Syntax :MATH<x>:FILTER:DELAY:TIME {<Time>}
:MATH<x>:FILTER:DELAY:TIME?
<x> = 1 to 4

<Time> = See the DL6000/DLM6000 User's Manual.

Example :MATH1:FILTER:DELAY:TIME 1S
:MATH1:FILTER:DELAY:TIME? -> :MATH1:
FILTER:DELAY:TIME 1.000E+00

:MATH<x>:FILTER:IIR?

Function Queries all settings related to the IIR filter computation.

Syntax :MATH<x>:FILTER:IIR?
<x> = 1 to 4

:MATH<x>:FILTER:IIR:FORDER (Filter Order)

Function Sets the filter order of the IIR filter computation or queries the current setting.

Syntax :MATH<x>:FILTER:IIR:FORDER {<Nrf>}
:MATH<x>:FILTER:IIR:FORDER?
<x> = 1 to 4
<Nrf> = 1 or 2

Example :MATH1:FILTER:IIR:FORDER 2
:MATH1:FILTER:IIR:FORDER? -> :MATH1:
FILTER:IIR:FORDER 2

:MATH<x>:FILTER:IIR:HIPASS?

Function Queries all settings related to the IIR high pass filter computation.

Syntax :MATH<x>:FILTER:IIR:HIPASS?
<x> = 1 to 4

:MATH<x>:FILTER:IIR:HIPASS:COFF

Function Sets the cutoff frequency of the IIR high pass filter computation or queries the current setting.

Syntax :MATH<x>:FILTER:IIR:HIPASS:
COFF {<Frequency>}
:MATH<x>:FILTER:IIR:HIPASS:COFF?
<x> = 1 to 4

<Frequency> = 0.01 to 1 G (Hz)

Example :MATH1:FILTER:IIR:HIPASS:COFF 10MHZ
:MATH1:FILTER:IIR:HIPASS:COFF?
-> :MATH1:FILTER:IIR:HIPASS:
COFF 10.00E+06

:MATH<x>:FILTER:IIR:LOWPASS?

Function Queries all settings related to the IIR low pass filter computation.

Syntax :MATH<x>:FILTER:IIR:LOWPASS?
<x> = 1 to 4

:MATH<x>:FILTER:IIR:LOWPASS:COFF

Function Sets the cutoff frequency of the IIR low pass filter computation or queries the current setting.

Syntax :MATH<x>:FILTER:IIR:LOWPASS:C
OFF {<Frequency>}
:MATH<x>:FILTER:IIR:LOWPASS:COFF?
<x> = 1 to 4

<Frequency> = 0.01 to 1 G (Hz)

Example :MATH1:FILTER:IIR:LOWPASS:COFF 10HZ
:MATH1:FILTER:IIR:LOWPASS:COFF?
-> :MATH1:FILTER:IIR:LOWPASS:
COFF 10.00E+00

:MATH<x>:FILTER:MAVG?

Function Queries all settings related to the moving average computation.

Syntax :MATH<x>:FILTER:MAVG?
<x> = 1 to 4

:MATH<x>:FILTER:MAVG:WEIGHT

Function Sets the weight of the moving average computation or queries the current setting.

Syntax :MATH<x>:FILTER:MAVG:WEIGHT {<Nrf>}
:MATH<x>:FILTER:MAVG:WEIGHT?
<x> = 1 to 4

<Nrf> = 2 to 128 in 2ⁿ steps

Example :MATH1:FILTER:MAVG:WEIGHT 2
:MATH1:FILTER:MAVG:WEIGHT? -> :MATH1:
FILTER:MAVG:WEIGHT 2

:MATH<x>:FILTER:TYPE

Function Sets the filter type or queries the current setting.

Syntax :MATH<x>:FILTER:TYPE {DELAY|HIPASS|
ILPASS|MAVG}
:MATH<x>:FILTER:TYPE?
<x> = 1 to 4

Example :MATH1:FILTER:TYPE DELAY
:MATH1:FILTER:TYPE? -> :MATH1:FILTER:
TYPE DELAY

:MATH<x>:IPOINT? (Initial Point)

Function Queries all settings related to the computation reference point.

Syntax :MATH<x>:IPOINT?
<x> = 1 to 4

:MATH<x>:IPOINT:JUMP

Function Moves the computation reference point to the specified position.

Syntax :MATH<x>:IPOINT:JUMP {<Nrf>|TRIGGER|Z1|
Z2}
<x> = 1 to 4
<Nrf> = -5 or 0 (div)

Example :MATH1:IPOINT:JUMP TRIGGER

5.18 MATH Group

:MATH<x>:IPOINT:POSITION

Function Sets the computation reference point or queries the current setting.

Syntax :MATH<x>:IPOINT:POSITION {<NRf>}
:MATH<x>:IPOINT:POSITION?
<x> = 1 to 4
<NRf> = -5 to 5 (div)

Example :MATH1:IPOINT:POSITION 0
:MATH1:IPOINT:POSITION? -> :MATH1:
IPOINT:POSITION 0.000E+00

Description This command is valid when :MATH<x>:OPERation
INtegral.

:MATH<x>:LABEL?

Function Queries all settings related to the label of the computed waveform.

Syntax :MATH<x>:LABEL?
<x> = 1 to 4

:MATH<x>:LABEL[:DEFINE]

Function Sets the label of the computed waveform or queries the current setting.

Syntax :MATH<x>:LABEL[:DEFINE] {<String>}
:MATH<x>:LABEL[:DEFINE]?
<x> = 1 to 4
<String> = Up to 8 characters

Example :MATH1:LABEL:DEFINE "MATH1"
:MATH1:LABEL:DEFINE? -> :MATH1:LABEL:
DEFINE "MATH1"

:MATH<x>:LABEL:MODE

Function Turns ON/OFF the label display of the computed waveform or queries the current setting.

Syntax :MATH<x>:LABEL:MODE {<Boolean>}
:MATH<x>:LABEL:MODE?
<x> = 1 to 4

:MATH<x>:OPERation

Function Sets the operator or queries the current setting.

Syntax :MATH<x>:OPERation {DA,GROup<y>|ECount,
<NRf>|FILTer,<NRf>|INtegral,<NRf>|
MINus,<NRf>,<NRf>|MULTiple,<NRf>,<NRf>|
PLUS,<NRf>,<NRf>|RCOu nt,<NRf>,<NRf>|
USERdefine}
<x> = 1 to 4
<y> = 1 to 5
<NRf> = 1 to 5 (you can only specify 5 for MATH2 to 4)

Example :MATH1:OPERATION FILTER,1
:MATH1:OPERATION? -> :MATH1:
OPERATION FILTER,1

Description For unary operators (ECount|FILTer|INtegral), select the target waveform using the first <NRf>.

For binary operators (MINus|MULTiple|PLUS|RCOu nt), select the target waveform of the first term using the first <NRf> and the target waveform of the second term using the second <NRf>.

On the DLM6000, when the Operation setting is set to DA, select GROup<x>.

<NRf> is not required for the USERdefine operator.

:MATH<x>:SCALE?

Function Queries all settings related to scaling.

Syntax :MATH<x>:SCALE?
<x> = 1 to 4

:MATH<x>:SCALE:CENTer

Function Sets the offset of the computed waveform or queries the current setting.

Syntax :MATH<x>:SCALE:CENTer {<NRf>|<Voltage>|
<Current>}
:MATH<x>:SCALE:CENTer?
<x> = 1 to 4
<NRf>, <Voltage>, and <Current> = See the DL6000/
DLM6000 User's Manual.

Example :MATH1:SCALE:CENTer 1
:MATH1:SCALE:CENTer? -> :MATH1:SCALE:
CENTer 1.000E+00

:MATH<x>:SCALE:MODE

Function Sets the scaling mode or queries the current setting.

Syntax :MATH<x>:SCALE:MODE {AUTO|MANual}
:MATH<x>:SCALE:MODE?
<x> = 1 to 4

Example :MATH1:SCALE:MODE AUTO
:MATH1:SCALE:MODE? -> :MATH1:SCALE:
MODE AUTO

:MATH<x>:SCALE:SENSitivity

Function Sets the vertical sensitivity of the computed waveform or queries the current setting.

Syntax :MATH<x>:SCALE:SENSitivity {<NRf>|<Voltage>|<Current>}
:MATH<x>:SCALE:SENSitivity?
<x> = 1 to 4
<NRf>, <Voltage>, and <Current> = See the DL6000/DLM6000 User's Manual.

Example :MATH1:SCALE:SENSITIVITY 1
:MATH1:SCALE:SENSITIVITY? -> :MATH1:
SCALE:SENSITIVITY 1.000E+00

:MATH<x>:SElect

Function Sets the display option or queries the current setting.

Syntax :MATH<x>:SElect {MATH|REFerence|OFF}
:MATH<x>:SElect?
<x> = 1 to 4

Example :MATH1:SELECT MATH
:MATH1:SELECT? -> :MATH1:SELECT MATH

:MATH<x>:THReshold<x>

Function Sets the edge detection level of the count computation or queries the current setting.

Syntax :MATH<x>:THReshold<x> {<NRf>|<Voltage>|<Current>}
:MATH<x>:THReshold<x>?
<x> of MATH<x> = 1 to 8
<x> of THReshold<x> = 1 or 2
<NRf>, <Voltage>, and <Current> = See the DL6000/DLM6000 User's Manual.

Example :MATH1:THRESHOLD1 1
:MATH1:THRESHOLD1? -> :MATH1:
THRESHOLD1 1.000E+00

Description THReshold2 is valid when the operation is {RCOUNT}.

:MATH<x>:UNIT?

Function Queries all settings related to the computation unit.

Syntax :MATH<x>:UNIT?
<x> = 1 to 4

:MATH<x>:UNIT[:DEFINE]

Function Sets the computation unit or queries the current setting.

Syntax :MATH<x>:UNIT[:DEFINE] {<String>}
:MATH<x>:UNIT[:DEFINE]?
<x> = 1 to 4
<String> = Up to 4 characters

Example :MATH1:UNIT:DEFINE "EU"
:MATH1:UNIT:DEFINE? -> :MATH1:UNIT:
DEFINE "EU"

:MATH<x>:UNIT:MODE

Function Sets the automatic/manual addition of the computation unit or queries the current setting.

Syntax :MATH<x>:UNIT:MODE {AUTO|USERdefine}
:MATH<x>:UNIT:MODE?
<x> = 1 to 8

Example :MATH1:UNIT:MODE AUTO
:MATH1:UNIT:MODE? -> :MATH1:UNIT:
MODE AUTO

:MATH<x>:USERdefine?

Function Queries all settings related to user-defined math or queries the current setting.

Syntax :MATH<x>:USERdefine?
<x> = 1 to 4

:MATH<x>:USERdefine:ARANGing

Function Executes auto ranging for user-defined math.

Syntax :MATH<x>:USERdefine:ARANGing
<x> = 1 to 4

Example :MATH1:USERDEFINE:ARANGING

:MATH<x>:USERdefine:AVERage?

Function Queries all averaging settings for user-defined computation.

Syntax :MATH<x>:USERdefine:AVERage?
<x> = 1 to 4

Description The command affects MATH1 to MATH4.

:MATH<x>:USERdefine:AVERage:EWEight

Function Sets or queries the attenuation constant of exponential averaging in user-defined computation.

Syntax :MATH<x>:USERdefine:AVERage:EWEight
{<NRf>}
:MATH<x>:USERdefine:AVERage:EWEight?
<x> = 1 to 4
<NRf> = 2 to 1024 (in 2n steps)

Example :MATH1:USERDEFINE:AVERAGE:EWEIGHT 2
:MATH1:USERDEFINE:AVERAGE:EWEIGHT?->:
MATH1:USERDEFINE:AVERAGE:EWEIGHT 2

Description The command affects MATH1 to MATH4.

:MATH<x>:USERdefine:AVERage:MODE

Function Sets or queries the averaging mode for user-defined computation.

Syntax :MATH<x>:USERdefine:AVERage:MODE
{EXPonent|OFF}
:MATH<x>:USERdefine:AVERage:MODE?
<x> = 1 to 4

Example :MATH1:USERDEFINE:AVERAGE:MODE EXPONENT
:MATH1:USERDEFINE:AVERAGE:MODE?->:
MATH1:USERDEFINE:AVERAGE:MODE EXPONENT

Description The command affects MATH1 to MATH4.

5.18 MATH Group

:MATH<x>:USERdefine:CONStant<x>

Function Sets a user-defined math constant or queries the current setting.

Syntax :MATH<x>:USERdefine:CONStant<x> {<NRf>}
:MATH<x>:USERdefine:CONStant<x>?
MATH<x>: <x> = 1 to 4
CONStant<x>: <x> = 1 to 4
<NRf> = -1.0000E+31 to 1.0000E+31

Example :MATH1:USERDEFINE:CONSTANT1 1
:MATH1:USERDEFINE:CONSTANT1? -> :MATH1:
USERDEFINE:CONSTANT1 1.000E+00

:MATH<x>:USERdefine:DEFine

Function Sets a user-defined math equation or queries the current setting.

Syntax :MATH<x>:USERdefine:DEFine {<string>}
:MATH<x>:USERdefine:DEFine?
<x> = 1 to 4
<string> = 128 characters or less

Example :MATH1:USERDEFINE:DEFINE "C1-C2"
:MATH1:USERDEFINE:DEFINE? ->: MATH1:
USERDEFINE:DEFINE "C1-C2"

Description Characters and symbols other than those on the keyboard displayed on the main unit screen cannot be used.
See the main unit user's manual for details about equations.

:MATH<x>:USERdefine:FILTer<y>?

Function Queries all filter settings for user-defined computation.

Syntax :MATH<x>:USERdefine:FILTer<y>?
<x> = 1 to 4
<y> = 1 or 2

Description The command affects MATH1 to MATH4.

:MATH<x>:USERdefine:FILTer<y>:BAND

Function Sets or queries the filter band (frequency band) for user-defined computation.

Syntax :MATH<x>:USERdefine:FILTer<y>:BAND
{BPASS|HPASS|LPASS}
:MATH<x>:USERdefine:FILTer<y>:BAND?
<x> = 1 to 4
<y> = 1 or 2

Example :MATH1:USERDEFINE:FILTER1:BAND BPASS
:MATH1:USERDEFINE:FILTER1:BAND?->:
MATH1:USERDEFINE:FILTER1:BAND BPASS

Description The command affects MATH1 to MATH4.

:MATH<x>:USERdefine:FILTer<y>:

CUTOff<z>

Function Sets or queries the cutoff frequency for user-defined computation.

Syntax :MATH<x>:USERdefine:FILTer<y>:CUTOff<z>
{<NRf>}
:MATH<x>:USERdefine:FILTer<y>:
CUTOff<z>?
<x> = 1 to 4
<y> = 1 or 2
<z> = 1 or 2
<NRf> = 2 to 30% (in 0.2% steps)

Example :MATH1:USERDEFINE:FILTER1:CUTOFF1 10
:MATH1:USERDEFINE:FILTER1:CUTOFF1?->:
MATH1:USERDEFINE:FILTER1:CUTOFF1 10.0

Description CUTOff2 can only be specified for ":MATH<x>:
USERdefine:FILTer<y>:BAND BPASS."
The command affects MATH1 to MATH4.

:MATH<x>:USERdefine:FILTer<y>:TYPE

Function Sets or queries the filter type for user-defined computation.

Syntax :MATH<x>:USERdefine:FILTer<y>:TYPE
{IIR|FIR}
:MATH<x>:USERdefine:FILTer<y>:TYPE?
<x> = 1 to 4
<y> = 1 or 2

Example :MATH1:USERDEFINE:FILTER1:TYPE IIR
:MATH1:USERDEFINE:FILTER1:TYPE?->:
MATH1:USERDEFINE:FILTER1:TYPE IIR

Description The command affects MATH1 to MATH4.

:MATH<x>:USERdefine:HISTory:ABORT

Function Cancels history computation for user-defined math.

Syntax :MATH<x>:USERdefine:HISTory:ABORT
<x> = 1 to 4

Example :MATH1:USERDEFINE:HISTORY:ABORT

:MATH<x>:USERdefine:HISTory:EXECute

Function Executes history computation for user-defined math.

Syntax :MATH<x>:USERdefine:HISTory:EXECute
<x> = 1 to 4

Example :MATH1:USERDEFINE:HISTORY:EXECUTE

5.19 MEASure Group

:MEASure?

Function Queries all settings related to the automated measurement of waveform parameters.

Syntax :MEASure?

:MEASure:BIT<x>?

Function Queries all settings related to each logic bit.

Syntax :MEASure:BIT<x>?

<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)

:MEASure:BIT<x>:AREA<x>?

Function Queries all settings related to each area.

Syntax : MEASure:BIT<x>:AREA<x>?

<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2

:MEASure:BIT<x>:AREA<x>:ALL

Function Turns ON/OFF all logic waveform parameters.

Syntax :MEASure:BIT<x>:AREA<x>:ALL {<Boolean>}
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2

Example :MEASURE:BIT1:AREA1:ALL ON

:MEASure:BIT<x>:AREA<x>:<parameter>?

Function Queries all settings related to logic waveform parameters.

Syntax :MEASure:BIT<x>:AREA<x>:<parameter>?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2
<parameter>={AVGPeriod|DElay|DT|DUTYcycle|ENUMber|FREQuency|NWIDth|PERiod|PWIDth}

:MEASure:BIT<x>:AREA<x>:<parameter>:COUNT?

Function Queries the count for continuous statistical processing of logic waveform parameters.

Syntax :MEASure:BIT<x>:AREA<x>:<parameter>:COUNT?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2
<parameter>={AVGPeriod|DElay|DT|DUTYcycle|ENUMber|FREQuency|NWIDth|PERiod|PWIDth}

Example (The following is an example of the period with bit 1 area 1.)

```
:MEASURE:BIT1:AREA1:PERIOD:COUNT?
-> :MEASURE:BIT1:AREA1:PERIOD:COUNT 0
```

:MEASure:BIT<x>:AREA<x>:<parameter>:{MAXimum|MEAN|MINimum|SDEVIation}?

Function Queries each statistical value of logic waveform parameters.

Syntax :MEASure:BIT<x>:AREA<x>:<parameter>:MAXimum?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2
<parameter>={AVGPeriod|DElay|DT|DUTYcycle|ENUMber|FREQuency|NWIDth|PERiod|PWIDth}

Example (The following is an example of the period with bit 1 area 1.)

```
:MEASURE:BIT1:AREA1:PERIOD:MAXIMUM?
-> :MEASURE:BIT1:AREA1:PERIOD:MAXIMUM 0
```

:MEASure:BIT<x>:AREA<x>:<parameter>:STATE

Function Turns ON/OFF the logic waveform parameters or queries the current setting.

Syntax :MEASure:BIT<x>:AREA<x>:<parameter>:STATE {<Boolean>}
:MEASure:BIT<x>:AREA<x>:<parameter>:STATE?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2
<parameter>={AVGPeriod|DElay|DT|DUTYcycle|ENUMber|FREQuency|NWIDth|PERiod|PWIDth}

Example (The following is an example of the period with bit 1 area 1.)

```
:MEASURE:BIT1:AREA1:PERIOD:STATE ON
:MEASURE:BIT1:AREA1:PERIOD:STATE?
-> :MEASURE:BIT1:AREA1:PERIOD:STATE 1
```

5.19 MEASure Group

:MEASure:BIT<x>:AREA<x>:<parameter>:VALUE?

- Function** Queries automatically measured values of logic waveform parameters.
- Syntax** :MEASure:BIT<x>:AREA<x>:<parameter>:VALUE? {<NRf>}
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2
<parameter>={AVGPeriod|DElay|DT|DUTYcycle|ENUMber|FREQuency|NWIDTH|PERiod|PWIDth|<NRf> = 1 to 100000
- Example** (The following is an example of the period with bit 1 area 1.)
:MEASURE:BIT1:AREA1:PERIOD:VALUE?
-> :MEASURE:BIT1:AREA1:PERIOD:VALUE 0
- Description**
- If measurement cannot be performed, NAN (Not A Number) is returned.
 - <NRf> indicates the n'th automated measured value in the past. For cycle statistics, specify the <NRf>'th cycle from the left of the screen. To specify the oldest automated measured value, specify 1. If <NRf> is omitted, the most recent automated measured value is specified. If the value corresponding to the relevant count is not present, NAN (Not A Number) is returned.

:MEASure:BIT<x>:AREA<x>:DElay:MEASure?

- Function** Queries all settings related to the measurement conditions for the source waveform of delay measurement between channels.
- Syntax** :MEASure:BIT<x>:AREA<x>:DElay:MEASure?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2

:MEASure:BIT<x>:AREA<x>:DElay:MEASure:COUNT

- Function** Sets the edge detection count for the source waveform of delay measurement between channels or queries the current setting.
- Syntax** :MEASure:BIT<x>:AREA<x>:DElay:MEASure:COUNT {<NRf>}
:MEASure:BIT<x>:AREA<x>:DElay:MEASure:COUNT?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2
<NRf> = 1 to 10
- Example** :MEASURE:BIT1:AREA1:DElay:MEASURE:COUNT 1
:MEASURE:BIT1:AREA1:DElay:MEASURE:COUNT?
-> :MEASURE:BIT1:AREA1:DElay:MEASURE:COUNT 1

:MEASure:BIT<x>:AREA<x>:DElay:MEASure:POLarity

- Function** Sets the polarity of the source waveform of delay measurement between channels or queries the current setting.
- Syntax** :MEASure:BIT<x>:AREA<x>:DElay:MEASure:POLarity {FALL|RISE}
:MEASure:BIT<x>:AREA<x>:DElay:MEASure:POLarity?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2
- Example** :MEASURE:BIT1:AREA1:DElay:MEASURE:POLARITY FALL
:MEASURE:BIT1:AREA1:DElay:MEASURE:POLARITY?
-> :MEASURE:BIT1:AREA1:DElay:MEASURE:POLARITY FALL

:MEASure:BIT<x>:AREA<x>:DElay:REFERENCE?

- Function** Queries all settings related to the reference waveform of delay measurement between channels.
- Syntax** :MEASure:BIT<x>:AREA<x>:DElay:REFERENCE?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2

:MEASure:BIT<x>:AREA<x>:DElay:REFERENCE:COUNT

- Function** Sets the edge detection count for the reference waveform of delay measurement between channels or queries the current setting.
- Syntax** :MEASure:BIT<x>:AREA<x>:DElay:REFERENCE:COUNT {<NRf>}
:MEASure:BIT<x>:AREA<x>:DElay:REFERENCE:COUNT?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2
<NRf> = 1 to 10
- Example** :MEASURE:BIT1:AREA1:DElay:REFERENCE:COUNT 1
:MEASURE:BIT1:AREA1:DElay:REFERENCE:COUNT?
-> :MEASURE:BIT1:AREA1:DElay:REFERENCE:COUNT 1

:MEASure:BIT<x>:AREA<x>:DELay:**REference:POLarity**

Function Sets the polarity of the reference waveform of delay measurement between channels or queries the current setting.

Syntax :MEASure:BIT<x>:AREA<x>:DELay:
REference:POLarity {FALL|RISE}
:MEASure:BIT<x>:AREA<x>:DELay:
REference:POLarity?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2

Example :MEASURE:BIT1:AREA1:DELAY:REFERENCE:
POLARITY FALL
:MEASURE:BIT1:AREA1:DELAY:REFERENCE:
POLARITY?
-> :MEASURE:BIT1:AREA1:DELAY:REFERENCE:
POLARITY FALL

:MEASure:BIT<x>:AREA<x>:DELay:**REference:TRACe**

Function Sets the trace for the reference waveform of delay measurement between channels or queries the current setting.

Syntax :MEASure:BIT<x>:AREA<x>:DELay:
REference:TRACe {<NRf>|A<y>|B<y>|C<y>|D<y>}
:MEASure:BIT<x>:AREA<x>:DELay:
REference:TRACe?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2
<NRf> = 1 to 8
<y> = 0 to 7

Example :MEASURE:BIT1:AREA1:DELAY:REFERENCE:
TRACE 1
:MEASURE:BIT1:AREA1:DELAY:REFERENCE:
TRACE?
-> :MEASURE:BIT1:AREA1:DELAY:
REFERENCE:TRACE 1

Description On 16-bit models, you can only select {<NRf>|A<y>|C<y>}.

:MEASure:BIT<x>:AREA<x>:DELay:SOURce

Function Sets the reference of delay measurement between channels or queries the current setting.

Syntax :MEASure:BIT<x>:AREA<x>:DELay:
SOURce {TRACe|TRIGger}
:MEASure:BIT<x>:AREA<x>:DELay:SOURce?
<x> of BIT<x> = 1 to 32 (On 16-bit models, you can set the x in BIT<x> to a value from 1 to 8 or 17 to 24.)
<x> of AREA<x> = 1 or 2

Example :MEASURE:BIT1:AREA1:DELAY:SOURCE TRACE
:MEASURE:BIT1:AREA1:DELAY:SOURCE?
-> :MEASURE:BIT1:AREA1:DELAY:
SOURCE TRACE

:MEASure:CALCulation?

Function Queries all settings related to calculation items.

Syntax :MEASure:CALCulation?

:MEASure:CALCulation:ALL

Function Turns ON/OFF all calculation items.

Syntax :MEASure:CALCulation:ALL {<Boolean>}

Example :MEASURE:CALCULATION:ALL ON

:MEASure:CALCulation:COUNt<x>?

Function Queries the statistical processing count of the calculation item.

Syntax :MEASure:CALCulation:COUNt<x>?

<x> = 1 to 4

Example :MEASURE:CALCULATION:COUNt1?
-> :MEASURE:CALCULATION:COUNt1 1

:MEASure:CALCulation:DEFine<x>

Function Sets the equation of the calculation item or queries the current setting.

Syntax :MEASure:CALCulation:DEFine<x>
{<String>}

:MEASure:CALCulation:DEFine<x>?

<x> = 1 to 4

<String> = Up to 128 characters

Example :MEASURE:CALCULATION:DEFINE1 "MAX(C1)"
:MEASURE:CALCULATION:DEFINE1?
-> :MEASURE:CALCULATION:
DEFINE1 "MAX(C1)"

:MEASure:CALCulation:{MAXimum<x>|MEAN<x>|MINimum<x>|SDEViation<x>}?

Function Queries the statistical value of the calculation item.

Syntax :MEASure:CALCulation:{MAXimum<x>|
MEAN<x>|MINimum<x>|SDEViation<x>}?

<x> of MAXimum<x> = 1 to 4

<x> of MEAN<x> = 1 to 4

<x> of MINimum<x> = 1 to 4

<x> of SDEViation<x> = 1 to 4

Example (The following is an example for the maximum value.)

:MEASURE:CALCULATION:MAXIMUM1?
-> :MEASURE:CALCULATION:
MAXIMUM1 1.000E+00

:MEASure:CALCulation:STATe<x>

Function Turns ON/OFF the calculation item or queries the current setting.

Syntax :MEASure:CALCulation:STATe<x>
{<Boolean>}

:MEASure:CALCulation:STATe<x>?

<x> = 1 to 4

Example :MEASURE:CALCULATION:STATE1 ON
:MEASURE:CALCULATION:STATE1?
-> :MEASURE:CALCULATION:STATE1 1

5.19 MEASure Group

:MEASure:CALCulation:VALue<x>?

Function Queries the automated measured value of the calculation item.

Syntax :MEASure:CALCulation:VALue<x>? {<NRf>}
<x> = 1 to 4
<NRf> = 1 to 100000

Example :MEASURE:CALCULATION:VALUE1
-> :MEASURE:CALCULATION:VALUE1 1.000E+00

Description • If the measurement is not possible, "NAN (Not A Number)" is returned.
• <NRf> indicates the nth automated measured value in the past.
In the case of cycle statistical processing, specify the <NRf>th cycle from the left of the screen.
To specify the oldest automated measured value, specify 1.
If <NRf> is omitted, the latest automated measured value is specified.
If the value corresponding to the relevant count is not present, "NAN (Not A Number)" is returned.

:MEASure:CONTInuous?

Function Queries all settings related to the continuous statistical processing.

Syntax :MEASure:CONTInuous?

:MEASure:CONTInuous:COUNT

Function Sets the continuous statistical processing count or queries the current setting.

Syntax :MEASure:CONTInuous:COUNT {<NRf>}
:MEASure:CONTInuous:COUNT?
<NRf> = 0 to 100000

Example :MEASURE:CONTINUOUS:COUNT 10
:MEASURE:CONTINUOUS:COUNT? -> :MEASURE:CONTINUOUS:COUNT 10

Description When <NRf> = 0, the maximum count that is possible under the current settings is automatically set.

:MEASure:CONTInuous:REStart

Function Restarts the continuous statistical processing.

Syntax :MEASure:CONTInuous:REStart

Example :MEASURE:CONTINUOUS:RESTART

Description Clears the previous statistical data.

:MEASure:CYCLe?

Function Queries all settings related to the cycle statistical processing.

Syntax :MEASure:CYCLe?

:MEASure:CYCLe:ABORT

Function Aborts the execution of the cycle statistical processing.

Syntax :MEASure:CYCLe:ABORT

Example :MEASURE:CYCLE:ABORT

:MEASure:CYCLe:EXECute

Function Executes the cycle statistical processing. This is an overlap command.

Syntax :MEASure:CYCLe:EXECute

Example :MEASURE:CYCLE:EXECUTE

Description Continues the operation without clearing the previous statistical data.

:MEASure:CYCLe:TRACe

Function Sets the cycle source trace of the continuous statistical processing count or queries the current setting.

Syntax :MEASure:CYCLe:TRACe {<NRf>|A<x>|B<x>|C<x>|D<x>}
:MEASure:CYCLe:TRACe?
<NRf> = 1 to 8
<x> = 1 to 7

Example :MEASURE:CYCLE:TRACE 1
:MEASURE:CYCLE:TRACE? -> :MEASURE:CYCLE:TRACE 1

Description On 16-bit models, you can only select {<NRf>|A<y>|C<y>}.

:MEASure:DISPlay

Function Turns ON/OFF the display of the automated measurement of waveform parameters or queries the current setting.

Syntax :MEASure:DISPlay {<Boolean>}
:MEASure:DISPlay?

Example :MEASURE:DISPLAY ON
:MEASURE:DISPLAY? -> :MEASURE:DISPLAY 1

:MEASure:HISTory:ABORT

Function Aborts the execution of the statistical processing of the history data.

Syntax :MEASure:HISTory:ABORT

Example :MEASURE:HISTORY:ABORT

:MEASure:HISTory:EXECute

Function Executes the statistical processing of the history data. This is an overlap command.

Syntax :MEASure:HISTory:EXECute

Example :MEASURE:HISTORY:EXECUTE

:MEASure:MODE

Function Sets the mode of the automated measurement of waveform parameters or queries the current setting.

Syntax :MEASure:MODE {BASIC|CONTInuous|CYCLe|HISTory}
:MEASure:MODE?

Example :MEASURE:MODE BASIC
:MEASURE:MODE? -> :MEASURE:MODE BASIC

:MEASure:THReshold?

Function Queries all settings related to the threshold levels of the automated measurement of waveform parameters.

Syntax :MEASure:THReshold?

EDescription This command is valid when the <Parameter> of
:MEASure:TRACe<x>:AREA<x>:<Parameter> is not RISE or FALL.

:MEASure:THReshold:TRACe<x>?

Function Queries the threshold levels of the trace.

Syntax :MEASure:THReshold:TRACe<x>?
<x> = 1 to 8

Description This command is valid when the <Parameter> of
:MEASure:TRACe<x>:AREA<x>:<Parameter> is not RISE or FALL.

:MEASure:THReshold:TRACe<x>:AUTO

Function Sets the detection mode when the auto setting of the threshold level is enabled or queries the current setting.

Syntax :MEASure:THReshold:TRACe<x>:AUTO {HLOW|PTOPeak}
:MEASure:THReshold:TRACe<x>:AUTO?
<x> = 1 to 8

Example :MEASURE:THRESHOLD:TRACE1:AUTO PTOPEAK
:MEASURE:THRESHOLD:TRACE1:AUTO?
-> :MEASURE:THRESHOLD:TRACE1:
AUTO PTOPEAK

Description This command is valid when the <Parameter> of
:MEASure:TRACe<x>:AREA<x>:<Parameter> is not RISE or FALL.

:MEASure:THReshold:TRACe<x>:LHYSteresis?

Function Queries all settings related to the level and hysteresis of the threshold level.

Syntax :MEASure:THReshold:TRACe<x>:
LHYSteresis?
<x> = 1 to 8

Description This command is valid when the <Parameter> of
:MEASure:TRACe<x>:AREA<x>:<Parameter> is not RISE or FALL.

:MEASure:THReshold:TRACe<x>:**LHYSteresis:HYSteresis**

Function Sets the hysteresis of the threshold level or queries the current setting.

Syntax :MEASure:THReshold:TRACe<x>:
LHYSteresis:HYSteresis {<NRf>}
:MEASure:THReshold:TRACe<x>:
LHYSteresis:HYSteresis?
<x> = 1 to 8
<NRf> = 0 to 4 (div)

Example :MEASURE:THRESHOLD:TRACE1:LHYSTERESIS:
HYSTERESIS 1
:MEASURE:THRESHOLD:TRACE1:LHYSTERESIS:
HYSTERESIS? -> :MEASURE:THRESHOLD:
TRACE1:LHYSTERESIS:HYSTERESIS 1.000E+00

Description This command is valid when the <Parameter> of
:MEASure:TRACe<x>:AREA<x>:<Parameter> is not RISE or FALL.

:MEASure:THReshold:TRACe<x>:**LHYSteresis:LEVel**

Function Sets the level of the threshold level or queries the current setting.

Syntax :MEASure:THReshold:TRACe<x>:
LHYSteresis:LEVel {<NRf>|<Voltage>|
<Current>}
:MEASure:THReshold:TRACe<x>:
LHYSteresis:LEVel?
<x> = 1 to 8
<NRf>, <Voltage>, and <Current> = See the DL6000/
DLM6000 User's Manual.

Example :MEASURE:THRESHOLD:TRACE1:LHYSTERESIS:
LEVEL 1
:MEASURE:THRESHOLD:TRACE1:LHYSTERESIS:
LEVEL? -> :MEASURE:THRESHOLD:TRACE1:
LHYSTERESIS:LEVEL 1.000E+00

Description This command is valid when the <Parameter> of
:MEASure:TRACe<x>:AREA<x>:<Parameter> is not RISE or FALL.

:MEASure:THReshold:TRACe<x>:MODE

Function Sets the setup mode of the threshold level or queries the current setting.

Syntax :MEASure:THReshold:TRACe<x>:MODE {AUTO|
LHYSteresis|ULOWer}
:MEASure:THReshold:TRACe<x>:MODE?
<x> = 1 to 8

Example :MEASURE:THRESHOLD:TRACE1:
MODE LHYSTERESIS
:MEASURE:THRESHOLD:TRACE1:MODE?
-> :MEASURE:THRESHOLD:TRACE1:
MODE LHYSTERESIS

Description This command is valid when the <Parameter> of
:MEASure:TRACe<x>:AREA<x>:<Parameter> is not RISE or FALL.

5.19 MEASure Group

:MEASure:THReshold:TRACe<x>:ULOWer?

Function Queries all settings related to the upper and lower limits of the threshold level.

Syntax :MEASure:THReshold:TRACe<x>:ULOWer?
<x> = 1 to 8

Description This command is valid when the <Parameter> of :MEASure:TRACe<x>:AREA<x>:<Parameter> is not RISE or FALL.

:MEASure:THReshold:TRACe<x>:ULOWer:RANGe

Function Sets the upper and lower limits of the threshold level or queries the current setting.

Syntax :MEASure:THReshold:TRACe<x>:ULOWer:RANGe {(<NRf>,<NRf>)|(<Voltage>,<Voltage>)|(<Current>,<Current>)}
:MEASure:THReshold:TRACe<x>:ULOWer:RANGe?
<x> = 1 to 8
<NRf>, <Voltage>, and <Current> = See the DL6000/DLM6000 User's Manual.

Example :MEASURE:THRESHOLD:TRACE1:ULOWER:
RANGE 1,2
:MEASURE:THRESHOLD:TRACE1:ULOWER:RANGE?
-> :MEASURE:THRESHOLD:TRACE1:ULOWER:
RANGE 2.000E+00,1.000E+00

Description This command is valid when the <Parameter> of :MEASure:TRACe<x>:AREA<x>:<Parameter> is not RISE or FALL.

:MEASure:TRACe<x>?

Function Queries all settings related to the trace.

Syntax :MEASure:TRACe<x>?
<x> = 1 to 8

:MEASure:TRACe<x>:AREA<x>?

Function Queries all settings related to the area.

Syntax :MEASure:TRACe<x>:AREA<x>?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

:MEASure:TRACe<x>:AREA<x>:ALL

Function Turns ON/OFF all waveform parameters.

Syntax :MEASure:TRACe<x>:AREA<x>:ALL
{<Boolean>}
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

Example :MEASURE:TRACE1:AREA1:ALL ON

:MEASure:TRACe<x>:AREA<x>:

<Parameter>?

Function Queries all settings related to the waveform parameter.

Syntax :MEASure:TRACe<x>:AREA<x>:<Parameter>?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2
<Parameter> = {AVGPeriod|BURSt|CMean|CRMS|CSDeviation|DElay|DT|DUTYcycle|ENUMber|FALL|FREQuency|HIGH|HILow|LOW|MAXimum|MEAN|MINimum|NOVershoot|NWIDth|PERiod|POVershoot|PTOPeak|PWIDth|RISE|RMS|SDEViation|TYCInteg|TYINteg|V1|V2}

:MEASure:TRACe<x>:AREA<x>:

<Parameter>:COUNT?

Function Queries the continuous statistical processing count of the waveform parameter.

Syntax :MEASure:TRACe<x>:AREA<x>:<Parameter>:
COUNT?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2
<Parameter> = {AVGPeriod|BURSt|CMean|CRMS|CSDeviation|DElay|DT|DUTYcycle|ENUMber|FALL|FREQuency|HIGH|HILow|LOW|MAXimum|MEAN|MINimum|NOVershoot|NWIDth|PERiod|POVershoot|PTOPeak|PWIDth|RISE|RMS|SDEViation|TYCInteg|TYINteg|V1|V2}

Example (The following is an example for the maximum value of trace 1 and area 1.)
:MEASURE:TRACE1:AREA1:MAXIMUM:COUNT?
-> :MEASURE:TRACE1:AREA1:MAXIMUM:
COUNT 0

:MEASure:TRACe<x>:AREA<x>:<Parameter>:{MAXimum|MEAN|MINimum|SDEViation}?

Function Queries the statistical value of the waveform parameter.

Syntax :MEASure:TRACe<x>:AREA<x>:<Parameter>:
{MAXimum|MEAN|MINimum|SDEViation}?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2
<Parameter> = {AVGPeriod|BURSt|CMean|CRMS|CSDeviation|DElay|DT|DUTYcycle|ENUMber|FALL|FREQuency|HIGH|HILow|LOW|MAXimum|MEAN|MINimum|NOVershoot|NWIDth|PERiod|POVershoot|PTOPeak|PWIDth|RISE|RMS|SDEViation|TYCInteg|TYINteg|V1|V2}

Example (The following is an example for the maximum value.)
:MEASURE:TRACE1:AREA1:MAXIMUM:
MAXIMUM? -> :MEASURE:TRACE1:AREA1:
MAXIMUM:MAXIMUM 1.000E+00

:MEASure:TRACe<x>:AREA<x>:**<Parameter>:STATE**

Function Turns ON/OFF the waveform parameter or queries the current setting.

Syntax :MEASure:TRACe<x>:AREA<x>:<Parameter>:
STATe {<Boolean>}
:MEASure:TRACe<x>:AREA<x>:<Parameter>:
STATe?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

<Parameter> = {AVGPeriod|BURSt|CMEan|CRMS|
CSDeviation|DELay|DT|DUTYcycle|ENUMber|FALL|
FREQuency|HIGH|HILow|LOW|MAXimum|MEAN|
MINimum|NOVershoot|NWIDTH|PERiod|POVershoot|
PTOPeak|PWIDTH|RISE|RMS|SDEViation|TYCInteg|
TYINteg|V1|V2}

Example (The following is an example for the maximum value of trace 1 and area 1.)

```
:MEASURE:TRACE1:AREA1:MAXIMUM:STATE ON
:MEASURE:TRACE1:AREA1:MAXIMUM:STATE?
-> :MEASURE:TRACE1:AREA1:MAXIMUM:
STATE 1
```

:MEASure:TRACe<x>:AREA<x>:**<Parameter>:VALUE?**

Function Queries the automated measured value of the waveform parameter.

Syntax :MEASure:TRACe<x>:AREA<x>:<Parameter>:
VALUe? {<NRF>}
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2
<Parameter> = {AVGPeriod|BURSt|CMEan|CRMS|
CSDeviation|DELay|DT|DUTYcycle|ENUMber|FALL|
FREQuency|HIGH|HILow|LOW|MAXimum|MEAN|
MINimum|NOVershoot|NWIDTH|PERiod|POVershoot|
PTOPeak|PWIDTH|RISE|RMS|SDEViation|TYCInteg|
TYINteg|V1|V2}
<NRF> = 1 to 100000

Example (The following is an example for the maximum value of trace 1 and area 1.)

```
:MEASURE:TRACE1:AREA1:MAXIMUM:VALUE?
-> :MEASURE:TRACE1:AREA1:MAXIMUM:
VALUE 1.000E+00
```

Description • If the measurement is not possible, "NAN (Not A Number)" is returned.

- <NRF> indicates the nth automated measured value in the past.
In the case of cycle statistical processing, specify the <NRF> cycle from the left of the screen.
To specify the oldest automated measured value, specify 1.
If <NRF> is omitted, the latest automated measured value is specified.
If the value corresponding to the relevant count is not present, "NAN (Not A Number)" is returned.

:MEASure:TRACe<x>:AREA<x>:DELay:**MEASure?**

Function Queries all settings related to the measurement conditions of the source waveform of the delay measurement between channels.

Syntax :MEASure:TRACe<x>:AREA<x>:DELay:
MEASure?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

:MEASure:TRACe<x>:AREA<x>:DELay:**MEASure:COUNT**

Function Sets the edge detection count of the source waveform of the delay measurement between channels or queries the current setting.

Syntax :MEASure:TRACe<x>:AREA<x>:DELay:
MEASure:COUNT {<NRF>}
:MEASure:TRACe<x>:AREA<x>:DELay:
MEASure:COUNT?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2
<NRF> = 1 to 10

Example :MEASURE:TRACE1:AREA1:DELAY:MEASURE:
COUNT 1
:MEASURE:TRACE1:AREA1:DELAY:MEASURE:
COUNT? -> :MEASURE:TRACE1:AREA1:DELAY:
MEASURE:COUNT 1

:MEASure:TRACe<x>:AREA<x>:DELay:**MEASure:POLarity**

Function Sets the polarity of the source waveform of the delay measurement between channels or queries the current setting.

Syntax :MEASure:TRACe<x>:AREA<x>:DELay:
MEASure:POLarity {FALL|RISE}
:MEASure:TRACe<x>:AREA<x>:DELay:
MEASure:POLarity?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

Example :MEASURE:TRACE1:AREA1:DELAY:MEASURE:
POLARITY RISE
:MEASURE:TRACE1:AREA1:DELAY:MEASURE:
POLARITY? -> :MEASURE:TRACE1:AREA1:
DELAY:MEASURE:POLARITY RISE

:MEASure:TRACe<x>:AREA<x>:DELay:**REference?**

Function Queries all settings related to the reference waveform of the delay measurement between channels.

Syntax :MEASure:TRACe<x>:AREA<x>:DELay:
REference?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

5.19 MEASure Group

:MEASure:TRACe<x>:AREA<x>:DElay:REFeRence:COUNT

Function Sets the edge detection count of the reference waveform of the delay measurement between channels or queries the current setting.

Syntax :MEASure:TRACe<x>:AREA<x>:DElay:REFeRence:COUNT {<NRf>}
:MEASure:TRACe<x>:AREA<x>:DElay:REFeRence:COUNT?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2
<NRf> = 1 to 10

Example :MEASURE:TRACE1:AREA1:DELAY:REFERENCE:COUNT 1
:MEASURE:TRACE1:AREA1:DELAY:REFERENCE:COUNT? -> :MEASURE:TRACE1:AREA1:DELAY:REFERENCE:COUNT 1

:MEASure:TRACe<x>:AREA<x>:DElay:REFeRence:POLarity

Function Sets the polarity of the reference waveform of the delay measurement between channels or queries the current setting.

Syntax :MEASure:TRACe<x>:AREA<x>:DElay:REFeRence:POLarity {FALL|RISE}
:MEASure:TRACe<x>:AREA<x>:DElay:REFeRence:POLarity?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

Example :MEASURE:TRACE1:AREA1:DELAY:REFERENCE:POLARITY FALL
:MEASURE:TRACE1:AREA1:DELAY:REFERENCE:POLARITY? -> :MEASURE:TRACE1:AREA1:DELAY:REFERENCE:POLARITY FALL

:MEASure:TRACe<x>:AREA<x>:DElay:REFeRence:TRACe

Function Sets the trace of the reference waveform of the delay measurement between channels or queries the current setting.

Syntax :MEASure:TRACe<x>:AREA<x>:DElay:REFeRence:TRACe {<NRf>|A<y>|B<y>|C<y>|D<y>}
:MEASure:TRACe<x>:AREA<x>:DElay:REFeRence:TRACe?
<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2
<NRf> = 1 to 8
<y> = 0 to 7

Example :MEASURE:TRACE1:AREA1:DELAY:REFERENCE:TRACE 1
:MEASURE:TRACE1:AREA1:DELAY:REFERENCE:TRACE? -> :MEASURE:TRACE1:AREA1:DELAY:REFERENCE:TRACE 1

Description {A<y>|B<y>|C<y>|D<y>} are only available on the DLM6000. On 16-bit models, you cannot select {B<y>|D<y>}.

:MEASure:TRACe<x>:AREA<x>:DElay:SOURce

Function Sets the reference of the delay measurement between channels or queries the current setting.

Syntax :MEASure:TRACe<x>:AREA<x>:DElay:SOURce {TRACe|TRIGger}
:MEASure:TRACe<x>:AREA<x>:DElay:SOURce?<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

Example :MEASURE:TRACE1:AREA1:DELAY:SOURCE TRACE
:MEASURE:TRACE1:AREA1:DELAY:SOURCE? -> :MEASURE:TRACE1:AREA1:DELAY:SOURCE TRACE

:MEASure:TRACe<x>:DPRoximal?

Function Queries all settings related to the distal and proximal values.

Syntax :MEASure:TRACe<x>:DPRoximal?<x> of TRACe<x> = 1 to 8
<x> of AREA<x> = 1 or 2

Description This command is valid when the <Parameter> of :MEASure:TRACe<x>:AREA<x>:<Parameter> is RISE or FALL.

:MEASure:TRACe<x>:DPRoximal:MODE

Function Sets the unit of the distal and proximal values or queries the current setting.

Syntax :MEASure:TRACe<x>:DPRoximal:MODE {PERCent|UNIT}
:MEASure:TRACe<x>:DPRoximal:MODE?
<x> of TRACe<x> = 1 to 8

Example :MEASURE:TRACE1:DPROXIMAL:MODE PERCENT
:MEASURE:TRACE1:DPROXIMAL:MODE? -> :MEASURE:TRACE1:DPROXIMAL:MODE PERCENT

Description This command is valid when the <Parameter> of :MEASure:TRACe<x>:AREA<x>:<Parameter> is RISE or FALL.

:MEASure:TRACe<x>:DPRoximal:PERCent

Function Sets the distal and proximal values as a percentage or queries the current setting.

Syntax :MEASure:TRACe<x>:DPRoximal:PERCent {<NRf>,<NRf>}
:MEASure:TRACe<x>:DPRoximal:PERCent?

<x> of TRACe<x> = 1 to 8

<NRf> = 0 to 100 (%)

Example :MEASURE:TRACE1:DPROXIMAL:PERCENT 10,90
:MEASURE:TRACE1:DPROXIMAL:PERCENT? -> :MEASURE:TRACE1:DPROXIMAL:PERCENT 10,90

Description This command is valid when the <Parameter> of :MEASure:TRACe<x>:AREA<x>:<Parameter> is RISE or FALL.

:MEASure:TRACe<x>:DPRoximal:UNIT

Function Sets the distal and proximal values in the specified unit or queries the current setting.

Syntax :MEASure:TRACe<x>:DPRoximal:UNIT {(<NRf>,<NRf>)|(<Voltage>,<Voltage>)|(<Current>,<Current>)}
:MEASure:TRACe<x>:DPRoximal:UNIT?

<x> of TRACe<x> = 1 to 8

<NRf>, <Voltage>, and <Current> = See the DL6000/DLM6000 User's Manual.

Example :MEASURE:TRACE1:DPROXIMAL:UNIT 1,-1
:MEASURE:TRACE1:DPROXIMAL:UNIT?
-> :MEASURE:TRACE1:DPROXIMAL:UNIT -1.000E+00,1.000E+00

Description This command is valid when the <Parameter> of :MEASure:TRACe<x>:AREA<x>:<Parameter> is RISE or FALL.

:MEASure:TRACe<x>:METHod

Function Sets the method for detecting the High/Low level for automated measurement of waveform parameters or queries the current setting.

Syntax :MEASure:TRACe<x>:METHod {AUTO|HISTogram|MAXMin}
:MEASure:TRACe<x>:METHod?

TRACe<x>: <x> = 1 to 8

xample :MEASURE:TRACE1:METHOD AUTO
:MEASURE:TRACE1:METHOD?
-> :MEASURE:TRACE1:METHOD AUTO

:MEASure:TRANge<x> (Time Range)

Function Sets the measurement range or queries the current setting.

Syntax :MEASure:TRANge<x> {<NRf>,<NRf>}
:MEASure:TRANge<x>?

<x> = 1 or 2

<NRf> = -5 to 5 (div)

Example :MEASURE:TRANGE1 -5,0
:MEASURE:TRANGE1? -> :MEASURE:TRANGE1 0.000E+00,-5.000E+00

:MEASure:WAIT?

Function Waits for the completion of the automated measurement with a timeout option.

Syntax :MEASure:WAIT? {<NRf>}
<NRf> = 1 to 360000 (timeout value, in units of 10 ms)

Example :MEASURE:WAIT 100? -> :MEASURE:WAIT 1

Description If the execution of the automated measurement completes within the timeout value, 0 is returned; if it is not complete or automated measurement is not being executed, 1 is returned. Even if the timeout value is set long, 0 is returned when the execution of the automated measurement is complete.

:MEASure:WINDow<x>

Function Sets the measurement source window of the area or queries the current setting.

Syntax :MEASure:WINDow<x> {MAIN|Z1|Z2}
:MEASure:WINDow<x>?
<x> = 1 or 2

Example :MEASURE:WINDOW1 MAIN
:MEASURE:WINDOW1? -> :MEASURE:WINDOW1 MAIN

5.20 REFERENCE GROUP

:REFerence<x>?

Function Queries all settings related to the reference.

Syntax :REFerence<x>?
<x> = 1 to 4

:REFerence<x>:LABel?

Function Queries all settings related to the waveform label of the reference.

Syntax :REFerence<x>:LABel?
<x> = 1 to 4

Example :REFERENCE1:LABel? -> :REFERENCE1:
LABel:DEFINE "REF1";MODE 1

:REFerence<x>:LABel[:DEFine]

Function Sets the waveform label of the reference or queries the current setting.

Syntax :REFerence<x>:LABel[:DEFine] {<String>}
:REFerence<x>:LABel[:DEFine]?
<x> = 1 to 4
<String> = Up to 8 characters

Example :REFERENCE1:LABel:DEFINE "REF1"
:REFERENCE1:LABel:DEFINE?
-> :REFERENCE1:LABel:DEFINE "REF1"

:REFerence<x>:LABel:MODE

Function Turns ON/OFF the waveform label display of the reference or queries the current setting.

Syntax :REFerence<x>:LABel:MODE {<Boolean>}
:REFerence<x>:LABel:MODE?
<x> = 1 to 4

Example :REFERENCE1:LABel:MODE ON
:REFERENCE1:LABel:MODE? -> :REFERENCE1:
LABel:MODE 1

:REFerence<x>:LOAD

Function Loads the waveform to the reference.

Syntax :REFerence<x>:LOAD {<NRf>}
<x> = 1 to 4
<NRf> = 1 to 8

Example :REFERENCE1:LOAD 1

:REFerence<x>:POSition

Function Sets the vertical position of the reference or queries the current setting.

Syntax :REFerence<x>:POSition {<NRf>}
:REFerence<x>:POSition?
<x> = 1 to 4
<NRf> = -4 to 4 (div)

Example :REFERENCE1:POSITION 1
:REFERENCE1:POSITION? -> :REFERENCE1:
POSITION 1.000E+00

:REFerence<x>:SElect

Function Sets the waveform (computation or reference) to the computation channel or queries the current setting.

Syntax :REFerence<x>:SElect {MATH|REFerence}
:REFerence<x>:SElect?
<x> = 1 to 4

Example :REFERENCE1:SELECT MATH
:REFERENCE1:SELECT? -> :REFERENCE1:
SELECT MATH

5.21 SEARCh Group

:SEARCh<x>?

Function Queries all settings related to the search function.

Syntax :SEARCh<x>?
<x> = 1 or 2

:SEARCh<x>:ABORt

Function Aborts the search.

Syntax :SEARCh<x>:ABORt
<x> = 1 or 2

Example :SEARCH1:ABORT

:SEARCh<x>:CLOCK?

Function Queries all settings related to the clock channel.

Syntax :SEARCh<x>:CLOCK?
<x> = 1 or 2

:SEARCh<x>:CLOCK:POLarity

Function Sets the polarity of the clock channel or queries the current setting.

Syntax :SEARCh<x>:CLOCK:POLarity {FALL|RISE}
:SEARCh<x>:CLOCK:POLarity?
<x> = 1 or 2

Example :SEARCH1:CLOCK:POLARITY RISE
:SEARCH1:CLOCK:POLARITY? -> :SEARCH1:
CLOCK:POLARITY RISE

Description • This command is invalid when :SEARCh<x>:

CLOCK:SOURce NONE.

- This command is valid when :SEARCh<x>:TYPE STATE.

- This command is valid when :SEARCh<x>:TYPE WIDTH and :SEARCh<x>:WIDTH:TYPE PSTATE.

:SEARCh<x>:CLOCK:SOURce

Function Sets the clock trace of the search or queries the current setting.

Syntax :SEARCh<x>:CLOCK:SOURce {<NRf>|NONE}
:SEARCh<x>:CLOCK:SOURce?
<x> = 1 or 2
<NRf> = 1 to 8

Example :SEARCH1:CLOCK:SOURCE NONE
:SEARCH1:CLOCK:SOURCE? -> :SEARCH1:
CLOCK:SOURCE NONE

Description • This command is valid when :SEARCh<x>:TYPE STATE.

- This command is valid when :SEARCh<x>:TYPE WIDTH and :SEARCh<x>:WIDTH:TYPE PSTATE.

:SEARCh<x>:DECimation

Function Sets the decimation detection of the skip mode or queries the current setting.

Syntax :SEARCh<x>:DECimation {<NRf>}
:SEARCh<x>:DECimation?
<x> = 1 or 2
<NRf> = 1 to 9999

Example :SEARCH1:DECIMATION 1
:SEARCH1:DECIMATION? -> :SEARCH1:
DECIMATION 1

5.21 SEARCh Group

:SEARCh<x>:EXECute

Function Executes the search. This is an overlap command.

Syntax :SEARCh<x>:EXECute
<x> = 1 or 2

Example :SEARCH1:EXECUTE

:SEARCh<x>:HOLDoff

Function Sets the hold off detection or queries the current setting.

Syntax :SEARCh<x>:HOLDoff {<Time>}
:SEARCh<x>:HOLDoff?
<x> = 1 or 2

<Time> = 0 to 1 s in 100-ps steps

Example :SEARCH1:HOLDOFF 0S
:SEARCH1:HOLDOFF? -> :SEARCH1:
HOLDOFF 0.000E+00

:SEARCh<x>:LOGic

Function Sets the search logic or queries the current setting.

Syntax :SEARCh<x>:LOGic {AND|OR}
:SEARCh<x>:LOGic?
<x> = 1 or 2

Example :SEARCH1:LOGIC OR
:SEARCH1:LOGIC? -> :SEARCH1:LOGIC OR

Description • This command is valid when :SEARCh<x>:
TYPE EQUalify|SPATtern|STATE.
• This command is valid when :SEARCh<x>:
TYPE WIDTH and :SEARCh<x>:WIDTH:
TYPE PQUalify|PSTATE.

:SEARCh<x>:MARK

Function Turns ON/OFF the search mark or queries the current setting.

Syntax :SEARCh<x>:MARK {<Boolean>}
:SEARCh<x>:MARK?
<x> = 1 or 2

Example :SEARCH1:MARK ON
:SEARCH1:MARK? -> :SEARCH1:MARK 1

:SEARCh<x>:POLarity

Function Sets the search polarity or queries the current setting.

Syntax :SEARCh<x>:POLarity {ENTER|EXIT|FALL|
FALSE|NEGative|POSitive|RISE|
TRUE}
:SEARCh<x>:POLarity?
<x> = 1 or 2

Example :SEARCH1:POLARITY ENTER
:SEARCH1:POLARITY? ->
:SEARCH1:POLARITY ENTER

Description • {FALL|RISE} is valid when :SEARCh<x>:TYPE
EDGE|EQUalify.
• {ENTER|EXIT} is valid when :SEARCh<x>:TYPE
STATE.
• {NEGative|POSitive} is valid when :SEARCh<x>:
TYPE WIDTH and :SEARCh<x>:WIDTH:TYPE
PQUalify|PULSE.
• {FALSE|TRUE} is valid when :SEARCh<x>:TYPE
WIDTH and :SEARCh<x>:WIDTH:TYPE PSTATE.

:SEARCh<x>:SElect

Function Sets the detection waveform number of the search function and queries the position that corresponds to the detection waveform number.

Syntax :SEARCh<x>:SElect {<Nrf>|MAXimum}
:SEARCh<x>:SElect?
<x> = 1 or 2
<Nrf> = 0 to 4999

Example :SEARCH1:SELECT 1
:SEARCH1:SELECT? -> :SEARCH1:
SELECT 1.500E+00

Description If there is no searched position, "NAN" is returned for the query.

:SEARCh<x>:SElect? MAXimum

Function Queries the detection count of the search function.

Syntax :SEARCh<x>:SElect? {MAXimum}
<x> = 1 or 2

Example :SEARCH1:SEECT? MAXIMUM -> :SEARCH1:
SELECT 100

Description If there is no searched position, "NAN" is returned for the query.

:SEARCh<x>:SLOGic?

Function Queries all settings related to the logic search.

Syntax :SEARCh<x>:SLOGic?
<x> = 1 or 2

:SEARCh<x>:SLOGic:CLOCK?

Function Queries all settings related to the logic search clock.

Syntax :SEARCh<x>:SLOGic:CLOCK?
<x> = 1 or 2

Example :SEARCH1:SLOGIC:CLOCK?
-> :SEARCH1:SLOGIC:CLOCK:POLARITY FALL;
SOURCE A0

:SEARCh<x>:SLOGic:CLOck:POLarity

Function Sets the polarity of the clock of the logic search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:CLOck:POLarity {FALL|RISE}
:SEARCh<x>:SLOGic:CLOck:POLarity?<x> = 1 or 2

Example :SEARCH1:SLOGIC:CLOCK:POLARITY FALL
:SEARCH1:SLOGIC:CLOCK:POLARITY?
-> :SEARCH1:SLOGIC:CLOCK:POLARITY FALL

:SEARCh<x>:SLOGic:CLOck:SOURce

Function Sets the clock for the logic search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:CLOck:SOURce {A<y>|B<y>|C<y>|D<y>|DONTcare}
:SEARCh<x>:SLOGic:CLOck:SOURce?<x> = 1 or 2<y> = 0 to 7

Example :SEARCH1:SLOGIC:CLOCK:SOURCE A0
:SEARCH1:SLOGIC:CLOCK:SOURCE?
-> :SEARCH1:SLOGIC:CLOCK:SOURCE A0

Description On 16-bit models, you can only select {A<y>|C<y>|DONTcare}.

:SEARCh<x>:SLOGic:POLarity

Function Sets the logic search polarity or queries the current setting.

Syntax :SEARCh<x>:SLOGic:POLarity {ENTER|EXIT|FALL|RISE|FALSE|NEGative|POSitive|TRUE}
:SEARCh<x>:SLOGic:POLarity?<x> = 1 or 2

Example :SEARCH1:SLOGIC:POLARITY FALL
:SEARCH1:SLOGIC:POLARITY? -> :SEARCH1:SLOGIC:POLARITY FALL

Description • {FALL|RISE} valid when :SEARCh<x>:TYPE LEDGe|LQQualify.
• {ENTER|EXIT} valid when :SEARCh<x>:TYPE LState.
• {NEGative|POSitive} valid when :SEARCh<x>:TYPE LWIDth and :SEARCh<x>:SLOGic:WIDTh:TYPE PQQualify|PULSe.
• FALSE|TRUE} valid when :SEARCh<x>:TYPE LWIDth and :SEARCh<x>:SLOGic:WIDTh:TYPE PState.

:SEARCh<x>:SLOGic:SOURce

Function Sets the logic search source or queries the current setting.

Syntax :SEARCh<x>:SLOGic:SOURce {A<y>|B<y>|C<y>|D<y>}
:SEARCh<x>:SLOGic:SOURce?<x> = 1 or 2<y> = 0 to 7

Example :SEARCH1:SLOGIC:SOURCE A0
:SEARCH1:SLOGIC:SOURCE? -> :SEARCH1:SLOGIC:SOURCE A0

Description On 16-bit models, you can only select {A<x>|C<x>}.

:SEARCh<x>:SLOGic:SPATtern? (Serial Pattern)

Function Queries all settings related to logic serial pattern search.

Syntax :SEARCh<x>:SLOGic:SPATtern?<x> = 1 or 2

:SEARCh<x>:SLOGic:SPATtern:CLOck?

Function Queries all settings related to the clock for the logic serial pattern search.

Syntax :SEARCh<x>:SLOGic:SPATtern:CLOck?<x> = 1 or 2

:SEARCh<x>:SLOGic:SPATtern:CLOck:MODE

Function Enables/disables the clock for the logic serial analysis pattern search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:SPATtern:CLOck:MODE {<Boolean>}
:SEARCh<x>:SLOGic:SPATtern:CLOck:MODE?<x> = 1 or 2

Example :SEARCH1:SLOGIC:SPATTERN:CLOCK:MODE ON
:SEARCH1:SLOGIC:SPATTERN:CLOCK:MODE?
-> :SEARCH1:SLOGIC:SPATTERN:CLOCK:MODE 1

:SEARCh<x>:SLOGic:SPATtern:CLOck:POLarity

Function Sets the polarity of the clock trace of the logic serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:SPATtern:CLOck:POLarity {FALL|RISE}
:SEARCh<x>:SLOGic:SPATtern:CLOck:POLarity?<x> = 1 or 2

Example :SEARCH1:SLOGIC:SPATTERN:CLOCK:POLARITY FALL
:SEARCH1:SLOGIC:SPATTERN:CLOCK:POLARITY?
-> :SEARCH1:SLOGIC:SPATTERN:CLOCK:POLARITY FALL

Description This command valid when :SEARCh<x>:SLOGic:SPATtern:CLOck:MODE ON.

5.21 SEARCh Group

:SEARCh<x>:SLOGic:SPATtern:CLOCK:SOURCE

Function Sets the clock trace for the logic serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:SPATtern:CLOCK:
SOURCE {A<y>|B<y>|C<y>|D<y>}
:SEARCh<x>:SLOGic:SPATtern:CLOCK:
SOURCE?
<x> = 1 or 2
<y> = 0 to 7

Example :SEARCH1:SLOGIC:SPATTERN:CLOCK:
SOURCE A0
:SEARCH1:SLOGIC:SPATTERN:CLOCK:SOURCE?
-> :SEARCH1:SLOGIC:SPATTERN:CLOCK:
SOURCE A0

Description • This command valid when :SEARCh<x>:SLOGic:SPATtern:CLOCK:MODE ON.
• On 16-bit models, you can only select {A<x>|C<x>}.

:SEARCh<x>:SLOGic:SPATtern:CS

Function Enables/disables the chip select for the logic serial analysis pattern search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:SPATtern:
CS {<Boolean>}
:SEARCh<x>:SLOGic:SPATtern:CS?
<x> = 1 or 2

Example :SEARCH1:SLOGIC:SPATTERN:CS ON
:SEARCH1:SLOGIC:SPATTERN:CS?
-> :SEARCH1:SLOGIC:SPATTERN:CS 1

Description This command valid when :SEARCh<x>:SLOGic:SPATtern:CLOCK:MODE ON.

:SEARCh<x>:SLOGic:SPATtern:LATCh?

Function Queries all settings related to the latch for the logic serial pattern search.

Syntax :SEARCh<x>:SLOGic:SPATtern:LATCh?
<x> = 1 or 2

:SEARCh<x>:SLOGic:SPATtern:LATCh:POLarity

Function Sets the polarity of the latch trace of the logic serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:SPATtern:LATCh:
POLarity {FALL|RISE}
:SEARCh<x>:SLOGic:SPATtern:LATCh:
POLarity?
<x> = 1 or 2

Example :SEARCH1:SLOGIC:SPATTERN:LATCH:
POLARITY FALL
:SEARCH1:SLOGIC:SPATTERN:LATCH:
POLARITY?
-> :SEARCH1:SLOGIC:SPATTERN:LATCH:
POLARITY FALL

Description • This command valid when :SEARCh<x>:SLOGic:SPATtern:CLOCK:MODE ON.
• Invalid for :SEARCh<x>:SLOGic:SPATtern:LATCH:TRACE DONTcare.

:SEARCh<x>:SLOGic:SPATtern:LATCh:TRACe

Function Sets the latch trace for the logic serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:SPATtern:LATCh:
TRACE {A<y>|B<y>|C<y>|D<y>|DONTcare}
:SEARCh<x>:SLOGic:SPATtern:LATCh:
TRACE?
<x> = 1 or 2
<y> = 0 to 7

Example :SEARCH1:SLOGIC:SPATTERN:LATCH:TRACE A0
:SEARCH1:SLOGIC:SPATTERN:LATCH:TRACE?
-> :SEARCH1:SLOGIC:SPATTERN:LATCH:
TRACE A0

Description • This command valid when :SEARCh<x>:SLOGic:SPATtern:CLOCK:MODE ON.
• On 16-bit models, you can only select {A<y>|C<y>|DONTcare}.

:SEARCh<x>:SLOGic:SPATtern[:SETup]?

Function Queries all settings related to the setup for the logic serial pattern search.

Syntax :SEARCh<x>:SLOGic:SPATtern[:SETup]?
<x> = 1 or 2

:SEARCh<x>:SLOGic:SPATtern[:SETup]:BITRate

Function Sets the bit rate for the logic serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:SPATtern[:SETup]:BITRate {<NRf>}
:SEARCh<x>:SLOGic:SPATtern[:SETup]:BITRate?
<x> = 1 or 2
<NRf>=1 to 1G(bps)

Example :SEARCH1:SLOGIC:SPATTERN:SETUP:BITRATE 1
:SEARCH1:SLOGIC:SPATTERN:SETUP:BITRATE?
-> :SEARCH1:SLOGIC:SPATTERN:SETUP:BITRATE 1.000E+00

Description This command valid when :SEARCh<x>:SLOGic:SPATtern:CLOCK:MODE is OFF.

:SEARCh<x>:SLOGic:SPATtern[:SETup]:CLEAr

Function Clears (Don't care) all patterns of the logic serial pattern search.

Syntax :SEARCh<x>:SLOGic:SPATtern[:SETup]:CLEAr
<x> = 1 or 2

Example :SEARCH1:SLOGIC:SPATTERN:SETUP:CLEAR

:SEARCh<x>:SLOGic:SPATtern[:SETup]:DATA?

Function Queries all settings related to the data for the logic serial pattern search.

Syntax :SEARCh<x>:SLOGic:SPATtern[:SETup]:DATA?
<x> = 1 or 2

:SEARCh<x>:SLOGic:SPATtern[:SETup]:DATA:ACTive

Function Sets the active trace level of the data for the logic serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:SPATtern[:SETup]:DATA:ACTive {HIGH|LOW}
:SEARCh<x>:SLOGic:SPATtern[:SETup]:DATA:ACTive?
<x> = 1 or 2

Example :SEARCH1:SLOGIC:SPATTERN:SETUP:DATA:ACTIVE HIGH
:SEARCH1:SLOGIC:SPATTERN:SETUP:DATA:ACTIVE?
-> :SEARCH1:SLOGIC:SPATTERN:SETUP:DATA:ACTIVE HIGH

:SEARCh<x>:SLOGic:SPATtern[:SETup]:DATA:TRACe

Function Sets the trace of the data for the logic serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:SPATtern[:SETup]:DATA:TRACe {A<y>|B<y>|C<y>|D<y>}
:SEARCh<x>:SLOGic:SPATtern[:SETup]:DATA:TRACe?
<x> = 1 or 2
<y> = 0 to 7

Example :SEARCH1:SLOGIC:SPATTERN:SETUP:DATA:TRACE A0
:SEARCH1:SLOGIC:SPATTERN:SETUP:DATA:TRACE?
-> :SEARCH1:SLOGIC:SPATTERN:SETUP:DATA:TRACE A0

Description On 16-bit models, you can only select {A<x>|C<x>}.

:SEARCh<x>:SLOGic:SPATtern[:SETup]:HEXA

Function Sets the pattern of the logic serial pattern search in hexadecimal notation.

Syntax :SEARCh<x>:SLOGic:SPATtern[:SETup]:HEXA {<string>}
<x> = 1 or 2
<string> = combination of up to 32 characters (0-F and X)

Example :SEARCH1:SLOGIC:SPATTERN:SETUP:HEXA "ABCD"

:SEARCh<x>:SLOGic:SPATtern[:SETup]:PATTern

Function Sets the pattern of the logic serial pattern search in binary notation, or queries the current setting.

Syntax :SEARCh<x>:SLOGic:SPATtern[:SETup]:PATTern {<string>}
:SEARCh<x>:SLOGic:SPATtern[:SETup]:PATTern?
<x> = 1 or 2
<string> = combination of up to 128 characters (0, 1, and X)

Example :SEARCH1:SLOGIC:SPATTERN:SETUP:PATTERN "1100110111101111"
:SEARCH1:SLOGIC:SPATTERN:SETUP:PATTERN?
-> :SEARCH1:SLOGIC:SPATTERN:SETUP:PATTERN "1100110111101111"

:SEARCh<x>:SLOGic:STATe?

Function Queries all settings related to the logic state search.

Syntax :SEARCh<x>:SLOGic:STATe?
<x> = 1 or 2

5.21 SEARCh Group

:SEARCh<x>:SLOGic:STAtE:BIT?

Function Queries all settings related to the bits of the logic state search.

Syntax :SEARCh<x>:SLOGic:STAtE:BIT?
<x> = 1 or 2

:SEARCh<x>:SLOGic:STAtE:BIT: {A<x>|B<x>|C<x>|D<x>}

Function Sets the truth conditions for each bit of the logic state search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:STAtE:BIT: {A<x>|B<x>|C<x>|D<x>} {DONTcare|HIGH|LOW}
:SEARCh<x>:SLOGic:STAtE:BIT: {A<x>|B<x>|C<x>|D<x>}?
<x> = 1 or 2
<y> = 0 to 7

Example :SEARCH1:SLOGIC:STATE:BIT:A0 DONTCARE
:SEARCH1:SLOGIC:STATE:BIT:A0?
-> :SEARCH1:SLOGIC:STATE:BIT:
A0 DONTCARE

Description On 16-bit models, you can only select {A<x>|C<x>}.

:SEARCh<x>:SLOGic:STAtE:BIT:CLEAr

Function Clears (Don't care) all truth conditions for each bit of the logic serial pattern search.

Syntax :SEARCh<x>:SLOGic:STAtE:BIT:CLEAr
<x> = 1 or 2

Example :SEARCH1:SLOGIC:STATE:BIT:CLEAr

:SEARCh<x>:SLOGic:STAtE:BIT:LOGic

Function Sets the logic of the logic state search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:STAtE:BIT:
LOGic {AND|OR}
:SEARCh<x>:SLOGic:STAtE:BIT:LOGic?
<x> = 1 or 2

Example :SEARCH1:SLOGIC:STATE:BIT:LOGIC AND
:SEARCH1:SLOGIC:STATE:BIT:LOGIC?
-> :SEARCH1:SLOGIC:STATE:BIT:LOGIC AND

:SEARCh<x>:SLOGic:STAtE:GROUp<x>?

Function Queries all settings related to each group of the logic state search.

Syntax :SEARCh<x>:SLOGic:STAtE:GROUp<x>?
<x> of SEARCh<x> = 1 or 2
<x> of GROUp<x> = 1 to 5

Example :SEARCH1:SLOGIC:STATE:GROUP1?
-> :SEARCH1:SLOGIC:STATE:GROUP1:
CONDITION DONTCARE;
DATA1 0.0000000E+00;
DATA2 255.00000E+00;
PATTERN "1111000011110000111100001111
0000"

:SEARCh<x>:SLOGic:STAtE:GROUp<x>:CLEAr

Function Clears (Don't care) all truth conditions for each group of the logic serial pattern search.

Syntax :SEARCh<x>:SLOGic:STAtE:GROUp<x>:CLEAr
<x> of SEARCh<x> = 1 or 2
<x> of GROUp<x> = 1 to 5

Example :SEARCH1:SLOGIC:STATE:GROUP1:CLEAr

:SEARCh<x>:SLOGic:STAtE:GROUp<x>:CONDition

Function Sets the determination condition for each group of the logic state search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:STAtE:GROUp<x>:
CONDition {BETWEn|DONTcare|FALSe|GTHan|LTHan|ORANge|TRUE}
:SEARCh<x>:SLOGic:STAtE:GROUp<x>:
CONDition?
<x> of SEARCh<x> = 1 or 2
<x> of GROUp<x> = 1 to 5

Example :SEARCH1:SLOGIC:STATE:GROUP1:
CONDITION BETWEEN
:SEARCH1:SLOGIC:STATE:GROUP1:
CONDITION?
-> :SEARCH1:SLOGIC:STATE:GROUP1:
CONDITION BETWEEN

:SEARCh<x>:SLOGic:STAtE:GROUp<x>:DATA<x>

Function Sets the comparison data for each group of the logic state search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:STAtE:GROUp<x>:
DATA<x> {<NRf>}
:SEARCh<x>:SLOGic:STAtE:GROUp<x>:
DATA<x>?
<x> of SEARCh<x> = 1 or 2
<x> of GROUp<x> = 1 to 5
<x> of DATA<x> = 1 or 2
<NRf> = See the main unit user's manual.

Example :SEARCH1:SLOGIC:STATE:GROUP1:DATA1 1
:SEARCH1:SLOGIC:STATE:GROUP1:DATA1?
-> :SEARCH1:SLOGIC:STATE:GROUP1:
DATA1 1.0000000E+00

Description • For :SEARCh<x>:SLOGic:STAtE:GROUp<x>:
CONDITION GTHan, set using :SEARCh<x>:
SLOGic:STAtE:GROUp<x>:DATA1.
• For :SEARCh<x>:SLOGic:STAtE:GROUp<x>:
CONDITION LTHan, set using :SEARCh<x>:
SLOGic:STAtE:GROUp<x>:DATA2.
• For :SEARCh<x>:SLOGic:STAtE:GROUp<x>:
CONDITION BETWEn|ORANge, set small values
with :SEARCh<x>:SLOGic:STAtE:GROUp<x>:
DATA1, and large values with :SEARCh<x>:
SLOGic:STAtE:GROUp<x>:DATA2.

:SEARCh<x>:SLOGic:STATe:GROUp<x>:HEXA

Function Sets the truth conditions for each group of the logic serial pattern search in hexadecimal notation.

Syntax :SEARCh<x>:SLOGic:STATe:GROUp<x>:
HEXA {<string>}
<x> of SEARCh<x> = 1 or 2
<x> of GROUp<x> = 1 to 5
<string> = combination of up to 8 characters (0-F and X)

Example :SEARCH1:SLOGIC:STATE:GROUP1:
HEXA "1A3F24CD"

Description If the number of bit mappings specified with :LOGic:GROUp<x>:MAPPING is too large, the lower bits are set to X. If the number is too small, the top bits are set.

:SEARCh<x>:SLOGic:STATe:GROUp<x>:PATtern

Function Sets the truth condition for each group of the logic state search in binary notation or queries the current setting.

Syntax :SEARCh<x>:SLOGic:STATe:GROUp<x>:
PATtern {<string>}
:SEARCh<x>:SLOGic:STATe:GROUp<x>:
PATtern?
<x> of SEARCh<x> = 1 or 2
<x> of GROUp<x> = 1 to 5
<string> = combination of up to 32 characters (0, 1, and X)

Example :SEARCH1:SLOGIC:STATE:GROUP1:
PATTERN "11110000111100001111000011110000"
:SEARCH1:SLOGIC:STATE:GROUP1:PATTERN?
-> :SEARCH1:SLOGIC:STATE:GROUP1:
PATTERN "11110000111100001111000011110000"

:SEARCh<x>:SLOGic:STATe:GROUp<x>:SYMBol

Function Sets the symbol item for each group of the logic state search.

Syntax :SEARCh<x>:SLOGic:STATe:GROUp<x>:
SYMBol {<string>}
<x> of SEARCh<x> = 1 or 2
<x> of GROUp<x> = 1 to 5
<string> = 16 characters or fewer

Example :SEARCH1:SLOGIC:STATE:GROUP1:
SYMBOL "TEST"

:SEARCh<x>:SLOGic:STATe:TYPE

Function Sets the setting method of the logic state search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:STATe:
TYPE {BIT|GROUp}
:SEARCh<x>:SLOGic:STATe:TYPE?
<x> = 1 or 2

Example :SEARCH1:SLOGIC:STATE:TYPE BIT
:SEARCH1:SLOGIC:STATE:TYPE?
-> :SEARCH1:SLOGIC:STATE:TYPE BIT

:SEARCh<x>:SLOGic:WIDTh?

Function Queries all settings of the logic pulse width search.

Syntax :SEARCh<x>:SLOGic:WIDTh?
<x> = 1 or 2

:SEARCh<x>:SLOGic:WIDTh:MODE

Function Sets the determination mode of the logic pulse width search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:WIDTh:
MODE {BETween|IN|NOTBetween|OUT|TIMEout}
:SEARCh<x>:SLOGic:WIDTh:MODE?
<x> = 1 or 2

Example :SEARCH1:SLOGIC:WIDTH:MODE BETWEEN
:SEARCH1:SLOGIC:WIDTH:MODE?
-> :SEARCH1:SLOGIC:WIDTH:MODE BETWEEN

:SEARCh<x>:SLOGic:WIDTh:TIME<x>

Function Sets the pulse width of the logic pulse width search or queries the current setting.

Syntax :SEARCh<x>:SLOGic:WIDTh:TIME<x>
{<time>}
:SEARCh<x>:SLOGic:WIDTh:TIME<x>?
<x> of SEARCh<x> = 1 or 2
<x> of TIME<x> = 1 or 2
<time> = 1 ns to 10 s in 500-ps steps

Example :SEARCH1:SLOGIC:WIDTH:TIME1 1S
:SEARCH1:SLOGIC:WIDTH:TIME1?
-> :SEARCH1:SLOGIC:WIDTH:
TIME1 1.000E+00

Description IME2 is valid for :SEARCh<x>:SLOGic:WIDTh:MODE BETWEEN|NOTBetween.

5.21 SEARCh Group

:SEARCh<x>:SLOGic:WIDTh:TYPE

Function Sets the logic pulse width search type or queries the current setting.

Syntax :SEARCh<x>:SLOGic:WIDTh:
TYPE {PQQualify|PStAtE|PULSe}
:SEARCh<x>:SLOGic:WIDTh:TYPE?
<x> = 1 or 2

Example :SEARCH1:SLOGIC:WIDTH:TYPE PQQUALIFY
:SEARCH1:SLOGIC:WIDTH:TYPE?
-> :SEARCH1:SLOGIC:WIDTH:TYPE PQQUALIFY

:SEARCh<x>:SMODE

Function Sets the skip mode or queries the current setting.

Syntax :SEARCh<x>:SMODE {DECimation|HOLDoff|
OFF}
:SEARCh<x>:SMODE?
<x> = 1 or 2

Example :SEARCH1:SMODE HOLDOFF
:SEARCH1:SMODE? -> :SEARCH1:
SMODE HOLDOFF

:SEARCh<x>:SPATtern? (Serial Pattern)

Function Queries all settings related to the serial pattern search.

Syntax :SEARCh<x>:SPATtern?
<x> = 1 or 2

:SEARCh<x>:SPATtern:CLOCK?

Function Queries all settings related to clock of the serial pattern search.

Syntax :SEARCh<x>:SPATtern:CLOCK?
<x> = 1 or 2

:SEARCh<x>:SPATtern:CLOCK:MODE

Function Enables/Disables the clock of the serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SPATtern:CLOCK:
MODE {<Boolean>}
:SEARCh<x>:SPATtern:CLOCK:MODE?
<x> = 1 or 2

Example :SEARCH1:SPATTERN:CLOCK:MODE ON
:SEARCH1:SPATTERN:CLOCK:MODE?
-> :SEARCH1:SPATTERN:CLOCK:MODE 1

:SEARCh<x>:SPATtern:CLOCK:POLarity

Function Sets the polarity of the clock trace of the serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SPATtern:CLOCK:
POLarity {FALL|RISE}
:SEARCh<x>:SPATtern:CLOCK:POLarity?
<x> = 1 or 2

Example :SEARCH1:SPATTERN:CLOCK:POLARITY FALL
:SEARCH1:SPATTERN:CLOCK:POLARITY?
-> :SEARCH1:SPATTERN:CLOCK:
POLARITY FALL

Description This command is valid when :SEARCh<x>:
SPATtern:CLOCK:MODE ON.

:SEARCh<x>:SPATtern:CLOCK:SOURce

Function Sets the clock trace of the serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SPATtern:CLOCK:
SOURce {<Nrf>}
:SEARCh<x>:SPATtern:CLOCK:SOURce?
<x> = 1 or 2
<Nrf> = 1 to 8

Example :SEARCH1:SPATTERN:CLOCK:SOURCE 1
:SEARCH1:SPATTERN:CLOCK:SOURCE?
-> :SEARCH1:SPATTERN:CLOCK:SOURCE 1

Description This command is valid when :SEARCh<x>:
SPATtern:CLOCK:MODE ON.

:SEARCh<x>:SPATtern:CS

Function Enables/Disables the chip select of the serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SPATtern:CS {<Boolean>}
:SEARCh<x>:SPATtern:CS?
<x> = 1 or 2

Example :SEARCH1:SPATTERN:CS ON
:SEARCH1:SPATTERN:CS? -> :SEARCH1:
SPATTERN:CS 1

Description This command is valid when :SEARCh<x>:
SPATtern:CLOCK:MODE ON.

:SEARCh<x>:SPATtern:LATCH?

Function Queries all settings related to latch of the serial pattern search.

Syntax :SEARCh<x>:SPATtern:LATCH?
<x> = 1 or 2

:SEARCh<x>:SPATtern:LATCH:POLarity

Function Sets the polarity of the latch trace of the serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SPATtern:LATCH:
POLarity {FALL|RISE}
:SEARCh<x>:SPATtern:LATCH:POLarity?
<x> = 1 or 2

Example :SEARCH1:SPATTERN:LATCH:POLARITY FALL
:SEARCH1:SPATTERN:LATCH:POLARITY?
-> :SEARCH1:SPATTERN:LATCH:
POLARITY FALL

Description • This command is valid when :SEARCh<x>:
SPATtern:CLOCK:MODE ON.
• This command is invalid when :SEARCh<x>:
SPATtern:LATCH:TRACe NONE.

: SEARCh<x>: SPATtern: LATCh: TRACe

Function Sets the latch trace of the serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SPATtern:LATCh:TRACe {<NRf>|NONE}
:SEARCh<x>:SPATtern:LATCh:TRACe?
<x> = 1 or 2
<NRf> = 1 to 8

Example :SEARCH1:SPATTERN:LATCH:TRACE 1
:SEARCH1:SPATTERN:LATCH:TRACE?
-> :SEARCH1:SPATTERN:LATCH:TRACE 1

Description This command is valid when :SEARCh<x>:SPATtern:CLOCK:MODE ON.

: SEARCh<x>: SPATtern: SETUp?

Function Queries all settings related to setup of the serial pattern search.

Syntax :SEARCh<x>:SPATtern:SETUp?
<x> = 1 or 2

: SEARCh<x>: SPATtern [: SETUp] : BITRate

Function Sets the bit rate of the serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SPATtern[:SETUp]:BITRate {<NRf>}
:SEARCh<x>:SPATtern[:SETUp]:BITRate?
<x> = 1 or 2
<NRf> = 1 to 1G (bps)

Example :SEARCH1:SPATTERN:SETUP:BITRATE 1
:SEARCH1:SPATTERN:SETUP:BITRATE?
-> :SEARCH1:SPATTERN:SETUP:BITRATE 1.000E+00

Description This command is valid when :SEARCh<x>:SPATtern:CLOCK:MODE OFF.

: SEARCh<x>: SPATtern [: SETUp] : CLear

Function Clears the entire pattern of the serial pattern search (to don't care).

Syntax :SEARCh<x>:SPATtern[:SETUp]:CLear
<x> = 1 or 2

Example :SEARCH1:SPATTERN:SETUP:CLEAR

: SEARCh<x>: SPATtern [: SETUp] : DATA?

Function Queries all settings related to data of the serial pattern search.

Syntax :SEARCh<x>:SPATtern[:SETUp]:DATA?
<x> = 1 or 2

: SEARCh<x>: SPATtern [: SETUp] : DATA:**ACTive**

Function Sets the active level of the data trace of the serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SPATtern[:SETUp]:DATA:ACTive {HIGH|LOW}
:SEARCh<x>:SPATtern[:SETUp]:DATA:ACTive?
<x> = 1 or 2

Example :SEARCH1:SPATTERN:SETUP:DATA:ACTIVE HIGH
:SEARCH1:SPATTERN:SETUP:DATA:ACTIVE?
-> :SEARCH1:SPATTERN:SETUP:DATA:ACTIVE HIGH

: SEARCh<x>: SPATtern [: SETUp] : DATA: TRACe

Function Sets the data trace of the serial pattern search or queries the current setting.

Syntax :SEARCh<x>:SPATtern[:SETUp]:DATA:TRACe {<NRf>}
:SEARCh<x>:SPATtern[:SETUp]:DATA:TRACe?
<x> = 1 or 2
<NRf> = 1 to 8

Example :SEARCH1:SPATTERN:SETUP:DATA:TRACE 1
:SEARCH1:SPATTERN:SETUP:DATA:TRACE?
-> :SEARCH1:SPATTERN:SETUP:DATA:TRACE 1

: SEARCh<x>: SPATtern [: SETUp] : HEXA

Function Sets the pattern of the serial pattern search in hexadecimal notation.

Syntax :SEARCh<x>:SPATtern[:SETUp]:HEXA {<String>}
<x> = 1 or 2
<String> = Up to 32 characters by combining '0' to 'F' and 'X'

Example :SEARCH1:SPATTERN:SETUP:HEXA "ABCD"

: SEARCh<x>: SPATtern [: SETUp] : PATtern

Function Sets the pattern of the serial pattern search in binary notation or queries the current setting.

Syntax :SEARCh<x>:SPATtern[:SETUp]:PATtern {<String>}
:SEARCh<x>:SPATtern[:SETUp]:PATtern?
<x> = 1 or 2
<String> = Up to 128 characters by combining '0', '1', and 'X'

Example :SEARCH1:SPATTERN:SETUP:PATTERN "1100110111101111"
:SEARCH1:SPATTERN:SETUP:PATTERN?
-> :SEARCH1:SPATTERN:SETUP:PATTERN "1100110111101111"

5.21 SEARCh Group

:SEARCh<x>:SPoiNt

Function Sets the search start position or queries the current setting.

Syntax :SEARCh<x>:SPoiNt {<NRf>}
:SEARCh<x>:SPoiNt?
<x> = 1 or 2
<NRf> = -5 to 5 (div)

Example :SEARCH1:SPoiNt 1
:SEARCH1:SPoiNt? -> :SEARCH1:
SPoiNt 1.000E+00

:SEARCh<x>:STRace

Function Sets the search source trace or queries the current setting.

Syntax :SEARCh<x>:STRace {<NRf>|A<y>|B<y>|C<y>|D<y>}
:SEARCh<x>:STRace?
<x> = 1 or 2
<y> = 0 to 7
<NRf> = 1 to 8

Example :SEARCH1:STRace 1
:SEARCH1:STRace? -> :SEARCH1:STRace 1

Description • This command is valid when :SEARCh<x>:TYPE
EDGE|EQualify.
• {A<y>|B<y>|C<y>|D<y>} are only available on the
DLM6000. On 16-bit models, you cannot select
{B<y>|D<y>}.
• This command is valid when :SEARCh<x>:
TYPE WIDTH and :SEARCh<x>:WIDTH:TYPE
PQualify|PULSe.

:SEARCh<x>:TRACe<x>?

Function Queries all settings related to the search conditions of the trace.

Syntax :SEARCh<x>:TRACe<x>?
<x> of SEARCh<x> = 1 or 2
<x> of TRACe<x> = 1 to 8

:SEARCh<x>:TRACe<x>:CONDition

Function Sets the condition to be satisfied for the trace or queries the current setting.

Syntax :SEARCh<x>:TRACe<x>:
CONDition {DONTcare|HIGH|LOW}
:SEARCh<x>:TRACe<x>:CONDition?
<x> of SEARCh<x> = 1 or 2
<x> of TRACe<x> = 1 to 8

Example :SEARCH1:TRACE1:CONDITION HIGH
:SEARCH1:TRACE1:CONDITION? -> :SEARCH1:
TRACE1:CONDITION HIGH

Description • This command is valid when :SEARCh<x>:TYPE
EQualify|SPATtern|STATe.
• This command is valid when :SEARCh<x>:
TYPE WIDTH and :SEARCh<x>:WIDTH:TYPE
PQualify|PSTATe.

:SEARCh<x>:TRACe<x>:HYSTeresis

Function Sets the hysteresis of the trace or queries the current setting.

Syntax :SEARCh<x>:TRACe<x>:HYSTeresis {<NRf>}
:SEARCh<x>:TRACe<x>:HYSTeresis?
<x> of SEARCh<x> = 1 or 2
<x> of TRACe<x> = 1 to 8
<NRf> = 0 to 4 div in 0.1-div steps

Example :SEARCH1:TRACE1:HYSTERESIS 1
:SEARCH1:TRACE1:HYSTERESIS?
-> :SEARCH1:TRACE1:HYSTERESIS 1.000E+00

:SEARCh<x>:TRACe<x>:LEVel

Function Sets the threshold level of the trace or queries the current setting.

Syntax :SEARCh<x>:TRACe<x>:LEVel {<NRf>|
<Voltage>|<Current>}
:SEARCh<x>:TRACe<x>:LEVel?
<x> of SEARCh<x> = 1 or 2
<x> of TRACe<x> = 1 to 8
<NRf>, <Voltage>, and <Current> = See the DLM6000/
DLM6000 User's Manual.

Example :SEARCH1:TRACE1:LEVEL 0
:SEARCH1:TRACE1:LEVEL? -> :SEARCH1:
TRACE1:LEVEL 0.000E+00

:SEARCh<x>:TYPE

Function Sets the search type or queries the current setting.

Syntax :SEARCh<x>:TYPE {EDGE|EQualify|
LINBus|LQualify|LSPATtern|LSTATe|
LWIDTH|SPATtern|STATe|WIDTH}
:SEARCh<x>:TYPE?
<x> = 1 or 2

Example :SEARCH1:TYPE EDGE
:SEARCH1:TYPE? -> :SEARCH1:TYPE EDGE

Description {LQualify|LSPATtern|LSTATe|LWIDTH} are only
available on the DLM6000.

:SEARCh<x>:WIDTH?

Function Queries all settings related to the pulse width search.

Syntax :SEARCh<x>:WIDTH?
<x> = 1 or 2

:SEARCh<x>:WIDTH:MODE

Function Sets the pulse width determination mode or queries the current setting.

Syntax :SEARCh<x>:WIDTH:MODE {BETWeen|IN|NOTBe
tween|OUT|TIMEout}
:SEARCh<x>:WIDTH:MODE?
<x> = 1 or 2

Example :SEARCH1:WIDTH:MODE TIMEOUT
:SEARCH1:WIDTH:MODE? -> :SEARCH1:WIDTH:
MODE TIMEOUT

: SEARCh<x>: WIDTH: TIME<x>

Function Sets the pulse width of the pulse width search or queries the current setting.

Syntax :SEARCh<x>:WIDTH:TIME<x> {<Time>}
 :SEARCh<x>:WIDTH:TIME<x>?
 <x> of SEARCh<x> = 1 or 2
 <x> of TIME<x> = 1 or 2
 <Time> = 1 ns to 10 s in 500-ps steps

Example :SEARCH1:WIDTH:TIME1 1S
 :SEARCH1:WIDTH:TIME1? -> :SEARCH1:
 WIDTH:TIME1 1.000E+00

Description TIME2 is valid when :SEARCh<x>:WIDTH:MODE
 BETWeen|NOTBetween.

: SEARCh<x>: WIDTH: TYPE

Function Sets the pulse width search type or queries the current setting.

Syntax :SEARCh<x>:WIDTH:TYPE {PQualify|PStAtE|
 PULSe}
 :SEARCh<x>:WIDTH:TYPE?
 <x> = 1 or 2

Example :SEARCH1:WIDTH:TYPE PQUALIFY
 :SEARCH1:WIDTH:TYPE? -> :SEARCH1:WIDTH:
 TYPE PQUALIFY

5.22 SNAP Group

: SNAP

Function Executes the snapshot.

Syntax : SNAP

Example : SNAP

5.23 SStart Group

:SStart?

Function Starts the waveform acquisition with the trigger mode set to single. If the waveform acquisition stops within the specified time period, 0 is returned at that point. If not, 1 is returned.

Syntax :SStart? {<NRf>}
<NRf> = 1 to 360000 (10 ms resolution: wait period, START and wait)
0 (START only. No wait.)
-360000 to -1 (10 ms unit: wait time, do not START and wait)

Example :SStart? 100 -> :SStart 0

Description

- If the specified time period is positive, data acquisition is started in the SINGLE TRIGGER mode and waits for the operation to stop.
- If the specified time period is 0, data acquisition is started and 0 is returned without waiting for the operation to stop.
- If the specified time period is negative, the instrument simply waits for the operation to stop. Data acquisition is not started.

5.24 STARt Group

: STARt

Function Starts the waveform acquisition.

Syntax : STARt

Example : STARt

Description Use STOP to stop the waveform acquisition.

5.25 STATUS Group

The commands in the STATUS group are used to make settings and inquiries related to the communication status function. There are no front panel keys that correspond to the commands in this group. For a description of the status report, see chapter 6.

:STATUS?

Function Queries all settings related to the communication status function.

Syntax :STATUS?

:STATUS:CONDition?

Function Queries the contents of the condition register.

Syntax :STATUS:CONDition?

Example :STATUS:CONDITION -> 16

Description For details on the condition register, see chapter 6, "Status Report."

:STATUS:EES?

Function Sets the extended event enable register or queries the current setting.

Syntax :STATUS:EES <Register>
:STATUS:EES?

<Register> = 0 to 65535

Example :STATUS:EES 257
:STATUS:EES? -> :STATUS:EES 257

Description For details on the extended event enable register, see chapter 6, "Status Report."

:STATUS:EESR?

Function Queries the content of the extended event register and clears the register.

Syntax :STATUS:EESR?

Example :STATUS:EESR? -> 1

Description For details on the extended event register, see chapter 6, "Status Report."

:STATUS:ERRor?

Function Queries the error code and message information (top of the error queue).

Syntax :STATUS:ERRor?

Example :STATUS:ERROR? ->
113, "Undefined header"

:STATUS:FILTer<x>

Function Sets the transition filter or queries the current setting.

Syntax :STATUS:FILTer<x> {RISE|FALL|BOTH|
NEVer}
:STATUS:FILTer<x>?

<x> = 1 to 16

Example :STATUS:FILTER2 RISE
:STATUS:FILTER2? -> :STATUS:FILTER2
RISE

Description For details on the transition filter, see chapter 6, "Status Report."

:STATUS:QENable

Function Sets whether to store messages other than errors to the error queue or queries the current setting.

Syntax :STATUS:QENable {<Boolean>}
:STATUS:QENable?

Example :STATUS:QENABLE ON
:STATUS:QENABLE? -> :STATUS:QENABLE 1

:STATUS:QMESsage

Function Sets whether or not to attach message information to the response to the "STATUS:ERRor?" query or queries the current setting.

Syntax :STATUS:QMESsage {<Boolean>}
:STATUS:QMESsage?

Example :STATUS:QMESSAGE OFF
:STATUS:QMESSAGE? -> :STATUS:QMESSAGE 0

:STATUS:SPOLl? (Serial Poll)

Function Executes serial polling.

Syntax :STATUS:SPOLl?

Example :STATUS:SPOLL? -> STATUS:SPOLL 0

Description This command is dedicated to the Ethernet interface (option).

5.26 STOP Group

: STOP

Function Stops the waveform acquisition.

Syntax :STOP

Example :STOP

Description Use START to start the waveform acquisition.

5.27 SYSTem Group

:SYSTem?

Function Queries all settings related to the system.

Syntax :SYSTem?

:SYSTem:CLICk

Function Turns ON/OFF the click sound or queries the current setting.

Syntax :SYSTem:CLICk {<Boolean>}

:SYSTem:CLICk?

Example :SYSTEM:CLICK ON

:SYSTEM:CLICK? -> :SYSTEM:CLICK 1

:SYSTem:CLOCk?

Function Queries all settings related to the date, time, and time difference with respect to GMT.

Syntax :SYSTem:CLOCk?

Example :SYSTEM:CLOCK? -> :SYSTEM:CLOCK:

DTIME "2007/01/06", "11:37:32", "09:00";

MODE 1

:SYSTem:CLOCk:DTIME

Function Sets the date, time, and time difference with respect to GMT or queries the current setting.

Syntax :SYSTem:CLOCk:DTIME {<String>, <String>, <String>}

:SYSTem:CLOCk:DTIME?

The left <String> = YYYY/MM/DD. See the DL6000/DLM6000 User's Manual.

The center <String> = HH:MM:SS. See the DL6000/DLM6000 User's Manual.

The right <String> = HH:MM. See the DL6000/DLM6000 User's Manual.

Example :SYSTEM:CLOCK:DTIME "2005/05/06", "11:37:32", "09:00"

:SYSTEM:CLOCK:DTIME? -> :SYSTEM:CLOCK:DTIME "2005/05/06",

"11:37:32", "09:00"

:SYSTem:CLOCk:MODE

Function Turns ON/OFF the date, time, and time difference with respect to GMT or queries the current setting.

Syntax :SYSTem:CLOCk:MODE {<Boolean>}

:SYSTem:CLOCk:MODE?

Example :SYSTEM:CLOCK:MODE ON

:SYSTEM:CLOCK:MODE? -> :SYSTEM:CLOCK:MODE 1

:SYSTem:FORMat:IMEMory[:EXECute]

Function Formats the internal memory.

Syntax :SYSTem:FORMat:IMEMory[:EXECute]

Example :SYSTEM:FORMAT:IMEMORY:EXECUTE

:SYSTem:FORMat:SDElete[:EXECute] (Sure Delete)

Function Clears and formats the internal memory.

Syntax :SYSTem:FORMat:SDElete[:EXECute]

Example :SYSTEM:FORMAT:SDELETE:EXECUTE

:SYSTem:LANGuage

Function Sets the message language or queries the current setting.

Syntax :SYSTem:LANGuage {CHINese|ENGLish|

JAPANese|KOREan|FRENch|GERMan|ITALian|

SPANish}

:SYSTem:LANGuage?

Example :SYSTEM:LANGUAGE JAPANESE

:SYSTEM:LANGUAGE? -> :SYSTEM:

LANGUAGE JAPANESE

:SYSTem:MFSize

Function Sets the menu font size or queries the current setting.

Syntax :SYSTem:MFSize {LARGe|SMALL}

Example :SYSTEM:MFSIZE LARGE

:SYSTEM:MFSIZE? -> :SYSTEM:MFSIZE LARGE

:SYSTem:MLANGuage

Function Sets the menu language or queries the current setting.

Syntax :SYSTem:MLANGuage {CHINese|ENGLish|

JAPANese|KOREan|FRENch|GERMan|ITALian|

SPANish}

:SYSTem:MLANGuage?

Example :SYSTEM:MLANGUAGE ENGLISH

:SYSTEM:MLANGUAGE? -> :SYSTEM:

MLANGUAGE ENGLISH

:SYSTem:OCANcel (Offset Cancel)

Function Sets or queries whether or not the specified offset voltage will be applied to measurement and computation (on/off).

Syntax :SYSTem:OCANcel {<Boolean>}

:SYSTem:OCANcel?

Example :SYSTEM:OCANCEL ON:SYSTEM:OCANCEL?->:

SYSTEM:OCANCEL 1

:SYSTem:OVERview

Function Displays system information.

Syntax :SYSTem:OVERview

Example :SYSTEM:OVERVIEW

5.27 SYSTem Group

:SYSTem:USBKeyboard

Function Sets the USB keyboard type or queries the current setting.

Syntax :SYSTem:USBKeyboard {ENGLish|JAPanese}
 :SYSTem:USBKeyboard?

Example :SYSTEM:USBKEYBOARD ENGLISH
 :SYSTEM:USBKEYBOARD? -> :SYSTEM:
 USBKEYBOARD ENGLISH

5.28 TELecomtest (Mask) Group

:TELecomtest?

Function Queries all settings related to the mask test.

Syntax :TELecomtest?

:TELecomtest:CATegory

Function Sets the mask test type or queries the current setting.

Syntax :TELecomtest:CATegory {EYEPattern|MASK}
:TELecomtest:CATegory?

Example :TELECOMTEST:CATEGORY EYEPATTERN
:TELECOMTEST:CATEGORY? -> :TELECOMTEST:
CATEGORY EYEPATTERN

:TELecomtest:DISPlay

Function Turns ON/OFF the mask test display or queries the current setting.

Syntax :TELecomtest:DISPlay {<Boolean>}
:TELecomtest:DISPlay?

Example :TELECOMTEST:DISPLAY ON
:TELECOMTEST:DISPLAY? -> :TELECOMTEST:
DISPLAY 1

:TELecomtest:EYEPattern?

Function Queries all settings related to the eye pattern.

Syntax :TELecomtest:EYEPattern?

:TELecomtest:EYEPattern:ALL

Function Turns ON/OFF all eye pattern parameters.

Syntax :TELecomtest:EYEPattern:ALL {<Boolean>}

Example :TELECOMTEST:EYEPATTERN:ALL ON

:TELecomtest:EYEPattern:<Parameter>?

Function Queries all settings related to the waveform parameter of the eye pattern.

Syntax :TELecomtest:EYEPattern:<Parameter>?
<Parameter> = {DBERate|EHEight|EWIDth|
FALL|JITTer<x>|PCROssing|PDUTYcycle|
QFACTOR|RISE|SDBase|SDTop|T1CRossing|
T2CRossing|VBASe|VCRossing|VTOP}
<x> = 1 or 2

Description • For the relationship between communication commands and parameters used by the DL9500/DL9700, see appendix 4.
• For parameter details, See the DL6000/DLM6000 User's Manual.

:TELecomtest:EYEPattern:<Parameter>:STATE

Function Turns ON/OFF the waveform parameter of the eye pattern or queries the current setting.

Syntax :TELecomtest:EYEPattern:<Parameter>:
STATE {<Boolean>}
:TELecomtest:EYEPattern:<Parameter>:
STATE?

<Parameter> = {DBERate|EHEight|EWIDth|
FALL|JITTer<x>|PCROssing|PDUTYcycle|
QFACTOR|RISE|SDBase|SDTop|T1CRossing|
T2CRossing|VBASe|VCRossing|VTOP}
<x> = 1 or 2

Example (The following is an example for DBERate.)

```
:TELECOMTEST:EYEPATTERN:DBERATE:
STATE ON
:TELECOMTEST:EYEPATTERN:DBERATE:STATE?
-> :TELECOMTEST:EYEPATTERN:DBERATE:
STATE 1
```

:TELecomtest:EYEPattern:<Parameter>:VALUE?

Function Queries the waveform parameter value of the eye pattern.

Syntax :TELecomtest:EYEPattern:<Parameter>:
VALUE?

<Parameter> = {DBERate|EHEight|EWIDth|
FALL|JITTer<x>|PCROssing|PDUTYcycle|
QFACTOR|RISE|SDBase|SDTop|T1CRossing|
T2CRossing|VBASe|VCRossing|VTOP}
<x> = 1 or 2

Example (The following is an example for DBERate.)

```
:TELECOMTEST:EYEPATTERN:DBERATE:VALUE?
-> :TELECOMTEST:EYEPATTERN:DBERATE:
VALUE 1.000E+00
```

:TELecomtest:EYEPattern:TLEVELs?

Function Queries all settings related to the threshold level of the eye pattern.

Syntax :TELecomtest:EYEPattern:TLEVELs?

:TELecomtest:EYEPattern:TLEVELs:MODE

Function Sets the unit of the threshold level of the eye pattern or queries the current setting.

Syntax :TELecomtest:EYEPattern:TLEVELs:
MODE {PERCent|UNIT}
:TELecomtest:EYEPattern:TLEVELs:MODE?

Example :TELECOMTEST:EYEPATTERN:TLEVELS:
MODE PERCENT
:TELECOMTEST:EYEPATTERN:TLEVELS:MODE?
-> :TELECOMTEST:EYEPATTERN:TLEVELS:
MODE PERCENT

5.28 TELecomtest (Mask) Group

:TELecomtest:EYEPattern:TLEvels:PERCent

Function Sets the threshold level of the eye pattern as a percentage or queries the current setting.

Syntax :TELecomtest:EYEPattern:TLEvels:
PERCent {<NRf>,<NRf>}
:TELecomtest:EYEPattern:TLEvels:
PERCent?
<NRf> = 0 to 100 (%)

Example :TELECOMTEST:EYEPATTERN:TLEVELS:
PERCENT 90,10
:TELECOMTEST:EYEPATTERN:TLEVELS:
PERCENT? -> :TELECOMTEST:EYEPATTERN:
TLEVELS:PERCENT 90,10

:TELecomtest:EYEPattern:TLEvels:UNIT

Function Sets the threshold level of the eye pattern in UNIT or queries the current setting.

Syntax :TELecomtest:EYEPattern:TLEvels:
UNIT {<NRf>,<NRf>|<Voltage>,<Voltage>|
<Current>,<Current>}
:TELecomtest:EYEPattern:TLEvels:UNIT?
<NRf>, <Voltage>, and <Current> = See the DL6000/
DLM6000 User's Manual.

Example :TELECOMTEST:EYEPATTERN:TLEVELS:
UNIT 1,0
:TELECOMTEST:EYEPATTERN:TLEVELS:UNIT?
-> :TELECOMTEST:EYEPATTERN:TLEVELS:
UNIT 1.000E+00,0.000E+00

:TELecomtest:EYEPattern:VDARK

Function Sets the dark level (zero light level) or queries the current setting.

Syntax :TELecomtest:EYEPattern:VDARK {<NRf>|
<Voltage>|<Current>}
:TELecomtest:EYEPattern:VDARK?
<NRf>, <Voltage>, and <Current> = See the DL6000/
DLM6000 User's Manual.

Example :TELECOMTEST:EYEPATTERN:VDARK 1.000E+00
:TELECOMTEST:EYEPATTERN:VDARK?
-> :TELECOMTEST:EYEPATTERN:VDARK
1.000E+00

:TELecomtest:MASK?

Function Queries all settings related to the mask test.

Syntax :TELecomtest:MASK?

:TELecomtest:MASK:ELEment<x>?

Function Queries all settings related to the element used in the mask test.

Syntax :TELecomtest:MASK:ELEment<x>?
<x> = 1 to 4

:TELecomtest:MASK:ELEment<x>:ALL

Function Turns ON/OFF all items of the element.

Syntax :TELecomtest:MASK:ELEment<x>:ALL
{<Boolean>}
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:ALL ON

:TELecomtest:MASK:ELEment<x>:

PSPCount? (Sample Point Count %)

Function Queries the settings related to the error rate for the number of sampled data points of the element.

Syntax :TELecomtest:MASK:ELEment<x>:PSPCount?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:PSPCOUNT?
-> :TELECOMTEST:MASK:ELEMENT1:PSPCOUNT:
STATE 1

:TELecomtest:MASK:ELEment<x>:

PSPCount:STATE

Function Turns ON/OFF the measurement of the error rate for the number of sampled data points of the element or queries the current setting.

Syntax :TELecomtest:MASK:ELEment<x>:PSPCount:
STATE {<Boolean>}
:TELecomtest:MASK:ELEment<x>:PSPCount:
STATE?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:PSPCOUNT:
STATE ON
:TELECOMTEST:MASK:ELEMENT1:PSPCOUNT:
STATE? -> :TELECOMTEST:MASK:ELEMENT1:
PSPCOUNT:STATE 1

:TELecomtest:MASK:ELEment<x>:

PSPCount:VALUE?

Function Queries the error rate for the number of sampled data points of the element.

Syntax :TELecomtest:MASK:ELEment<x>:PSPCount:
VALUE?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:PSPCOUNT:
VALUE? -> :TELECOMTEST:MASK:ELEMENT1:
PSPCOUNT:VALUE 1.000E+00

:TELecomtest:MASK:ELEment<x>:

PWCount? (Wave Count %)

Function Queries the settings related to the error rate for the acquisition count of the element.

Syntax :TELecomtest:MASK:ELEment<x>:PWCount?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:PWCOUNT?
-> :TELECOMTEST:MASK:ELEMENT1:PWCOUNT:
STATE 1

:TELecomtest:MASK:ELEMeNt<x>:**PWCount:STATE**

Function Turns ON/OFF the measurement of the error rate for the acquisition count of the element or queries the current setting.

Syntax :TELecomtest:MASK:ELEMeNt<x>:PWCount:STATE {<Boolean>}
:TELecomtest:MASK:ELEMeNt<x>:PWCount:STATE?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:PWCOUNT:STATE ON
:TELECOMTEST:MASK:ELEMENT1:PWCOUNT:STATE? -> :TELECOMTEST:MASK:ELEMENT1:PWCOUNT:STATE 1

:TELecomtest:MASK:ELEMeNt<x>:**PWCount:VALUE?**

Function Queries the error rate for the acquisition count of the element.

Syntax :TELecomtest:MASK:ELEMeNt<x>:PWCount:VALUE?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:PWCOUNT:VALUE? -> :TELECOMTEST:MASK:ELEMENT1:PWCOUNT:VALUE 1.000E+00

:TELecomtest:MASK:ELEMeNt<x>:**SPCount? (Sample Point Count)**

Function Queries the settings related to the number of sampled data points for the element that results in error.

Syntax :TELecomtest:MASK:ELEMeNt<x>:SPCount?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:SPCOUNT?
-> :TELECOMTEST:MASK:ELEMENT1:SPCOUNT:STATE 1

:TELecomtest:MASK:ELEMeNt<x>:**SPCount:STATE**

Function Turns ON/OFF the measurement of the number of sampled data points for the element that results in error or queries the current setting.

Syntax :TELecomtest:MASK:ELEMeNt<x>:SPCount:STATE {<Boolean>}
:TELecomtest:MASK:ELEMeNt<x>:SPCount:STATE?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:SPCOUNT:STATE ON
:TELECOMTEST:MASK:ELEMENT1:SPCOUNT:STATE? -> :TELECOMTEST:MASK:ELEMENT1:SPCOUNT:STATE 1

:TELecomtest:MASK:ELEMeNt<x>:**SPCount:VALUE?**

Function Queries the number of sampled data points for the element that resulted in error.

Syntax :TELecomtest:MASK:ELEMeNt<x>:SPCount:VALUE?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:SPCOUNT:VALUE? -> :TELECOMTEST:MASK:ELEMENT1:SPCOUNT:VALUE 1

:TELecomtest:MASK:ELEMeNt<x>:WCOUNT? (Wave Count)

Function Queries the settings related to the acquisition count for the element that results in error.

Syntax :TELecomtest:MASK:ELEMeNt<x>:WCOUNT?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:WCOUNT?
-> :TELECOMTEST:MASK:ELEMENT1:WCOUNT:STATE 1

:TELecomtest:MASK:ELEMeNt<x>:WCOUNT:STATE

Function Turns ON/OFF the measurement of the acquisition count for the element that results in error or queries the current setting.

Syntax :TELecomtest:MASK:ELEMeNt<x>:WCOUNT:STATE {<Boolean>}
:TELecomtest:MASK:ELEMeNt<x>:WCOUNT:STATE?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:WCOUNT:STATE ON
:TELECOMTEST:MASK:ELEMENT1:WCOUNT:STATE? -> :TELECOMTEST:MASK:ELEMENT1:WCOUNT:STATE 1

:TELecomtest:MASK:ELEMeNt<x>:**WCOUNT:VALUE?**

Function Queries the acquisition count for the element that resulted in error.

Syntax :TELecomtest:MASK:ELEMeNt<x>:WCOUNT:VALUE?
<x> = 1 to 4

Example :TELECOMTEST:MASK:ELEMENT1:WCOUNT:VALUE? -> :TELECOMTEST:MASK:ELEMENT1:WCOUNT:VALUE 1

5.28 TELecomtest (Mask) Group

:TELecomtest:MMODE

Function Turns ON/OFF the computed waveform or queries the current setting.

Syntax :TELecomtest:MMODE {<Boolean>}
:TELecomtest:MMODE?

Example :TELECOMTEST:MMODE ON
:TELECOMTEST:MMODE? -> :TELECOMTEST:
MMODE 1

:TELecomtest:TRACe

Function Sets the source trace of the mask test or queries the current setting.

Syntax :TELecomtest:TRACe {<NRf>}
:TELecomtest:TRACe?

<NRf> = 1 to 8

Example :TELECOMTEST:TRACE 1
:TELECOMTEST:TRACE? -> :TELECOMTEST:
TRACE 1

:TELecomtest:TRANge (Time Range)

Function Sets the measurement range of the mask test or queries the current setting.

Syntax :TELecomtest:TRANge {<NRf>,<NRf>}
:TELecomtest:TRANge?

<NRf> = -5 to 5 (div)

Example :TELECOMTEST:TRANGE -5,0
:TELECOMTEST:TRANGE? -> :TELECOMTEST:
TRANGE 0.000E+00,-5.000E+00

:TELecomtest:WINDow

Function Sets the measurement source window of the mask test or queries the current setting.

Syntax :TELecomtest:WINDow {MAIN|Z1|Z2}
:TELecomtest:WINDow?

Example :TELECOMTEST:WINDOW MAIN
:TELECOMTEST:WINDOW? -> :TELECOMTEST:
WINDOW MAIN

5.29 TIMEbase Group

:TIMEbase?

Function Queries all settings related to the time base.

Syntax :TIMEbase?

Example :TIMEBASE? -> :TIMEBASE:TDIV 1.000E-06

:TIMEbase:SRATE? (Sample RATE)

Function Queries the sample rate or queries the current setting.

Syntax :TIMEbase:SRATE?

Example :TIMEBASE:SRATE? -> :TIMEBASE:
SRATE 125.0E+06

:TIMEbase:TDIV

Function Sets the T/div value or queries the current setting.

Syntax :TIMEbase:TDIV {<Time>}

:TIMEbase:TDIV?

<Time> = 500 ps to 50 s

Example :TIMEBASE:TDIV 1NS
:TIMEBASE:TDIV? -> :TIMEBASE:
TDIV 1.000E-06

5.30 TRIGger Group

:TRIGger?

Function Queries all settings related to the trigger.

Syntax :TRIGger?

:TRIGger:ACTion?

Function Queries all settings related to action-on-trigger.

Syntax :TRIGger:ACTion?

:TRIGger:ACTion:ACQCount

Function Sets the action count of action-on-trigger or queries the current setting.

Syntax :TRIGger:ACTion:ACQCount {<NRf>|
INFinite}
:TRIGger:ACTion:ACQCount?
<NRf> = 1 to 1000000

Example :TRIGGER:ACTION:ACQCOUNT 10
:TRIGGER:ACTION:ACQCOUNT? -> :TRIGGER:
ACTION:ACQCOUNT 10

:TRIGger:ACTion:BUZZer

Function Sets whether to sound a buzzer when an action is activated or queries the current setting.

Syntax :TRIGger:ACTion:BUZZer {<Boolean>}
:TRIGger:ACTion:BUZZer?

Example :TRIGGER:ACTION:BUZZER ON
:TRIGGER:ACTION:BUZZER? -> :TRIGGER:
ACTION:BUZZER 1

:TRIGger:ACTion:HCOPY

Function Sets whether or not to output screen image data (ON/OFF) when an action is activated, or queries the current setting.

Syntax :TRIGger:ACTion:HCOPY {<Boolean>}
:TRIGger:ACTion:HCOPY?

Example :TRIGGER:ACTION:HCOPY ON
:TRIGGER:ACTION:HCOPY? -> :TRIGGER:
ACTION:HCOPY 1

:TRIGger:ACTion:MAIL?

Function Queries all settings related to the mail transmission when an action is activated.

Syntax :TRIGger:ACTion:MAIL?

:TRIGger:ACTion:MAIL:INTERval

Function Sets the interval at which to send mail when an action is activated or queries the current setting.

Syntax :TRIGger:ACTion:MAIL:INTERval
{OFF|<NRf>}
:TRIGger:ACTion:MAIL:INTERval?
<NRf> = 1 to 1440 (min)

Example :TRIGGER:ACTION:MAIL:INTERVAL 10
:TRIGGER:ACTION:MAIL:INTERVAL?
-> :TRIGGER:ACTION:MAIL:INTERVAL 10

:TRIGger:ACTion:MAIL:MODE

Function Sets whether to send mail when an action is activated or queries the current setting.

Syntax :TRIGger:ACTion:MAIL:MODE {<Boolean>}
:TRIGger:ACTion:MAIL:MODE?

Example :TRIGGER:ACTION:MAIL:MODE ON:TRIGGER:
ACTION:MAIL:MODE? -> :TRIGGER:ACTION:
MAIL:MODE 1

:TRIGger:ACTion:MODE

Function Sets the action-on-trigger mode or queries the current setting.

Syntax :TRIGger:ACTion:MODE {ACONdition|OFF}
:TRIGger:ACTion:MODE?

Example :TRIGGER:ACTION:MODE ACONDITION
:TRIGGER:ACTION:MODE? -> :TRIGGER:
ACTION:MODE ACONDITION

:TRIGger:ACTion:SAVE

Function Sets whether to save the waveform data to the storage medium (ON/OFF) when an action is activated or queries the current setting.

Syntax :TRIGger:ACTion:SAVE {<Boolean>}
:TRIGger:ACTion:SAVE?

Example :TRIGGER:ACTION:SAVE ON
:TRIGGER:ACTION:SAVE? -> :TRIGGER:
ACTION:SAVE 1

:TRIGger:ACTion:START

Function Starts the action-on-trigger.

Syntax :TRIGger:ACTion:START

Example :TRIGGER:ACTION:START

:TRIGger:ACTion:STOP

Function Stops the action-on-trigger.

Syntax :TRIGger:ACTion:STOP

Example :TRIGGER:ACTION:STOP

:TRIGger:BTRigger?

Function Queries all B trigger condition settings.

Syntax :TRIGger:BTRigger?

:TRIGger:BTRigger:COMBination

Function Sets or queries the trigger combination.

Syntax :TRIGger:BTRigger:COMBination
{ABN|ADB|OFF}
:TRIGger:BTRigger:COMBination?

Example :TRIGGERr:BTRIGGER:COMBINATION ABN
:TRIGGERr:BTRIGGER:COMBINATION?->:
TRIGGERr:BTRIGGER:COMBINATION ABN

:TRIGger:BTRigger:COUNT

Function Sets or queries the number of times condition B must be met for the A->B(n) trigger.

Syntax :TRIGger:BTRigger:COUNT {<NRf>}
:TRIGger:BTRigger:COUNT?
<NRf> = 1 to 1,000,000,000

Example :TRIGGER:BTRIGGER:COUNT 1
:TRIGGER:BTRIGGER:COUNT?->:TRIGGER:
BTRIGGER:COUNT 1

:TRIGger:BTRigger:DElay

Function Sets or queries the delay time for condition B for the A Delay B trigger.

Syntax :TRIGger:BTRigger:DElay {<Time>}
:TRIGger:BTRigger:DElay?
<Time> = 0 to 10 s (in 5 ps steps)

Example :TRIGGER:BTRIGGER:DElay 1s
:TRIGGER:BTRIGGER:DElay?->:TRIGGER:
BTRIGGER:DElay 1.000E+00

:TRIGger:BTRigger:EDGE

Function Queries all B edge trigger settings.

Syntax :TRIGger:BTRigger:EDGE?

:TRIGger:BTRigger:EDGE:SLOPe

Function Sets or queries the B edge trigger slope.

Syntax :TRIGger:BTRigger:EDGE:SLOPe
{RISE|FALL}
:TRIGger:BTRigger:EDGE:SLOPe?

Example :TRIGGER:BTRIGGER:EDGE:SLOPe RISE
:TRIGGER:BTRIGGER:EDGE:SLOPe?->:
TRIGGER:BTRIGGER:EDGE:SLOPe RISE

:TRIGger:BTRigger:EDGE:SOURce

Function Sets or queries the B edge trigger source.

Syntax :TRIGger:BTRigger:EDGE:SOURce
{<NRf>|EXTErnal}
:TRIGger:BTRigger:EDGE:SOURce?
<NRf> = 1 to 4

Example :TRIGGER:BTRIGGER:EDGE:SOURce 1
:TRIGGER:BTRIGGER:EDGE:SOURce?->:
TRIGGER:BTRIGGER:EDGE:SOURce 1

:TRIGger:CLOCK?

Function Queries all settings related to the clock channel.

Syntax :TRIGger:CLOCK?

:TRIGger:CLOCK:POLarity

Function Sets the polarity of the clock channel or queries the current setting.

Syntax :TRIGger:CLOCK:POLarity {ENTER|EXIT|
FALL|RISE}
:TRIGger:CLOCK:POLarity?

Example :TRIGGER:CLOCK:POLARITY RISE
:TRIGGER:CLOCK:POLARITY? -> :TRIGGER:
CLOCK:POLARITY RISE

Description • This command is invalid when :TRIGger:CLOCK:
SOURCE NONE.

- {ENTER|EXIT} is valid when :TRIGger:SOURce:
CHANnel<x>:WINDow ON. For all other cases,
{FALL|RISE} is valid.
- This command is valid when :TRIGger:TYPE
PState|STATE.

:TRIGger:CLOCK:SOURce

Function Sets the source waveform of the clock channel or queries the current setting.

Syntax :TRIGger:CLOCK:SOURce {<NRf>|NONE}
:TRIGger:CLOCK:SOURce?
<NRf> = 1 to 4

Example :TRIGGER:CLOCK:SOURce NONE
:TRIGGER:CLOCK:SOURce? -> :TRIGGER:
CLOCK:SOURce NONE

Description This command is valid when :TRIGger:TYPE
PState|STATE.

:TRIGger:DElay?

Function Queries all settings related to the trigger delay.

Syntax :TRIGger:DElay?

:TRIGger:DElay[:TIME]

Function Sets the delay value the trigger delay or queries the current setting.

Syntax :TRIGger:DElay[:TIME] {<Time>}
:TRIGger:DElay[:TIME]?
<Time> = 0 to 10 s in 5-ps steps

Example :TRIGGER:DElay:TIME 1S
:TRIGGER:DElay:TIME? -> :TRIGGER:DElay:
TIME 1.000E+00

:TRIGger:EDGE?

Function Queries all edge trigger settings.

Syntax :TRIGger:EDGE?

5.30 TRIGger Group

:TRIGger:EDGE:COUPling

Function Sets or queries the edge trigger source trigger coupling.

Syntax :TRIGger:EDGE:COUPling {AC|DC}
:TRIGger:EDGE:COUPling?

Example :TRIGGER:EDGE:COUPLING DC
:TRIGGER:EDGE:COUPLING?->:TRIGGER:EDGE:COUPLING DC

Description You cannot use this command when the trigger source is set to EXTERNAL or LINE (or when it is set to a logic bit on the DLM).

:TRIGger:EDGE:HFRejection (HighFrequencyREJECTION)

Function Sets or queries the on/off status of the trigger source low-pass filter (HF rejection) for edge triggering.

Syntax :TRIGger:EDGE:HFRejection
{<Frequency>|OFF}
:TRIGger:EDGE:HFRejection?
<Frequency> = 20MHz or 15kHz

Example :TRIGGER:EDGE:HFREJECTION OFF
:TRIGGER:EDGE:HFREJECTION?->:TRIGGER:EDGE:HFREJECTION OFF

Description You cannot use this command when the trigger source is set to EXTERNAL or LINE (or when it is set to a logic bit on the DLM).

:TRIGger:EDGE:HYSTeresis

Function Sets or queries the noise rejection setting for the edge trigger source trigger level.

Syntax :TRIGger:EDGE:HYSTeresis {HIGH|LOW}
:TRIGger:EDGE:HYSTeresis?

Example :TRIGGER:EDGE:HYSTERESIS HIGH
:TRIGGER:EDGE:HYSTERESIS?->:TRIGGER:EDGE:HYSTERESIS HIGH

Description You cannot use this command when the trigger source is set to EXTERNAL or LINE (or when it is set to a logic bit on the DLM).

:TRIGger:EDGE:LEVel

Function Sets or queries the edge trigger source trigger level.

Syntax :TRIGger:EDGE:LEVel {<Voltage>}
:TRIGger:EDGE:LEVel?
<Voltage> = See the DL6000/DLM6000 User's Manual for this information.

Example :TRIGGER:EDGE:LEVEL 0V
:TRIGGER:EDGE:LEVEL?->:TRIGGER:EDGE:LEVEL 0.000E+00

Description • You cannot use this command when the trigger source is set to LINE (or when it is set to a logic bit on the DLM).
• When the Probe Type setting is set to Current, this command sets or queries the <Current> value.

:TRIGger:EDGE:PROBe

Function Sets or queries the external trigger source probe setting for edge triggering.

Syntax :TRIGger:EDGE:PROBe {<NRf>}
:TRIGger:EDGE:PROBe?
<NRf> = 1 or 10

Example :TRIGGER:EDGE:PROBE 1
:TRIGGER:EDGE:PROBE?->:TRIGGER:EDGE:PROBE 1

Description You can only use this command when the trigger source is set to EXTERNAL.

:TRIGger:EDGE:SLOPe

Function Sets or queries the trigger source trigger slope (the polarity when window is set to ON) for edge triggering.

Syntax :TRIGger:EDGE:SLOPe
{RISE|FALL|ENTER|EXIT}
:TRIGger:EDGE:SLOPe?

Example :TRIGGER:EDGE:SLOPE RISE
:TRIGGER:EDGE:SLOPE?->:TRIGGER:EDGE:SLOPE RISE

Description • You cannot use this command when the trigger source is set to LINE.
• Select {ENTER|EXIT} when :TRIGger:EDGE:SOURCE is set to a value from 1 to 4 and :TRIGGER:EDGE:WINDOW is set to ON. Select {FALL|RISE} otherwise.

:TRIGger:EDGE:SOURce

Function Sets or queries the edge trigger source.

Syntax :TRIGger:EDGE:SOURce {<NRf>|EXTERNAL|LINE|A<x>|B<x>|C<x>|D<x>}
:TRIGger:EDGE:SOURce?
<NRf> = 1 to 4
<x> = 0 to 7

Example :TRIGGER:EDGE:SOURCE 1
:TRIGGER:EDGE:SOURCE?->:TRIGGER:EDGE:SOURCE 1

Description You can select {A<x>|B<x>|C<x>|D<x>} on a DLM with a -L32 suffix. You can select {A<x>|C<x>} on a DLM with a -L16 suffix.

:TRIGger:EDGE:WIDTH

Function Sets or queries the edge trigger source window width.

Syntax :TRIGger:EDGE:WIDTH {<Voltage>}
 :TRIGger:EDGE:WIDTH?
 <Voltage> = See the DL6000/DLM6000 User's Manual for this information.

Example :TRIGGER:EDGE:WIDTH 1V
 :TRIGGER:EDGE:WIDTH?->:TRIGGER:EDGE:
 WIDTH 1.000E+00

Description • You cannot use this command when the trigger source is set to EXTERNAL or LINE (or when it is set to a logic bit on the DLM6000).
 • When the Probe Type setting is set to Current, this command sets or queries the <Current> value.

:TRIGger:EDGE:WINDOW

Function Sets or queries the edge trigger source window.

Syntax :TRIGger:EDGE:WINDOW {<Boolean>}
 :TRIGger:EDGE:WINDOW?

Example :TRIGGER:EDGE:WINDOW ON
 :TRIGGER:EDGE:WINDOW?->:TRIGGER:EDGE:
 WINDOW 1

Description You cannot use this command when the trigger source is set to EXTERNAL or LINE (or when it is set to a logic bit on the DLM).

:TRIGger:EINTerval?

Function Queries all settings related to the event interval.

Syntax :TRIGger:EINTerval?

:TRIGger:EINTerval:EVENT<x>?

Function Queries all settings related to the event.

Syntax :TRIGger:EINTerval:EVENT<x>?
 <x> = 1 or 2

Description EVENT2 is valid when :TRIGger:TYPE
 EIDelay|EISequence.

:TRIGger:EINTerval:EVENT<x>:CLOCK?

Function Queries all settings related to the clock channel of the event.

Syntax :TRIGger:EINTerval:EVENT<x>:CLOCK?
 <x> = 1 or 2

:TRIGger:EINTerval:EVENT<x>:CLOCK:**POLarity**

Function Sets the polarity of the clock channel of the event or queries the current setting.

Syntax :TRIGger:EINTerval:EVENT<x>:CLOCK:
 POLarity {ENTER|EXIT|FALL|RISE}
 :TRIGger:EINTerval:EVENT<x>:CLOCK:
 POLarity?
 <x> = 1 or 2

Example :TRIGGER:EINTerval:EVENT1:CLOCK:
 POLARITY FALL
 :TRIGGER:EINTerval:EVENT1:CLOCK:
 POLARITY? -> :TRIGGER:EINTerval:EVENT1:
 CLOCK:POLARITY FALL

Description • This command is invalid if :TRIGger:
 EINTerval:EVENT<x>:CLOCK:SOURce NONE.
 • {ENTER|EXIT} is valid when :TRIGger:SOURce:
 CHANnel<x>:WINDOW ON. For all other cases,
 {FALL|RISE} is valid.
 • This command is valid when :TRIGger:
 EINTerval:EVENT<x>:TYPE PState|STATE.

5.30 TRIGger Group

:TRIGger:EINterval:EVENT<x>:CLOCK:SOURCE

Function Sets the source waveform of the clock channel of the event or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:CLOCK:
SOURCE {<NRf>|NONE}
:TRIGger:EINterval:EVENT<x>:CLOCK:
SOURCE?
<x> = 1 or 2
<NRf> = 1 to 4

Example :TRIGGER:EINTERVAL:EVENT1:CLOCK:
SOURCE 1
:TRIGGER:EINTERVAL:EVENT1:CLOCK:SOURCE?
-> :TRIGGER:EINTERVAL:EVENT1:CLOCK:
SOURCE 1

Description This command is valid when :TRIGger:
EINterval:EVENT<x>:TYPE PState|STATE.

:TRIGger:EINterval:EVENT<x>:ESTate?

Function Queries all settings related to the edge/state trigger.

Syntax :TRIGger:EINterval:EVENT<x>:ESTate?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:ESTATE?
-> :TRIGGER:EINTERVAL:EVENT1:ESTATE:
SOURCE 1;POLARITY FALL

:TRIGger:EINterval:EVENT<x>:ESTate:POLarity

Function Sets the polarity of the edge/state trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:ESTate:
POLarity {ENTER|EXIT|FALL|RISE}
:TRIGger:EINterval:EVENT<x>:ESTate:
POLarity?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:ESTATE:
POLARITY ENTER
:TRIGGER:EINTERVAL:EVENT1:ESTATE:
POLARITY? -> :TRIGGER:EINTERVAL:
EVENT1:ESTATE:POLARITY ENTER

Description • This command is valid when :TRIGger:
EINterval:EVENT<x>:TYPE EDGE and
:TRIGger:EINterval:EVENT<x>:
ESTate:SOURCE LINE.
• {ENTER|EXIT} is valid when :TRIGger:
EINterval:EVENT<x>:TYPE EDGE|EQUALify
and :TRIGger:SOURCE:CHANNEL<x>:WINDOW
ON. {FALL|RISE} is valid when :TRIGger:
EINterval:EVENT<x>:TYPE EDGE|EQUALify
and :TRIGger:SOURCE:CHANNEL<x>:WINDOW
OFF.
• {ENTER|EXIT} is valid when :TRIGger:
EINterval:EVENT<x>:TYPE STATE.

:TRIGger:EINterval:EVENT<x>:LOGic?

Function Queries all settings related to the logic trigger of the event.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic?
<x> = 1 or 2

:TRIGger:EINterval:EVENT<x>:LOGic:CLOCK?

Function Queries all settings related to the logic trigger clock.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
CLOCK?
<x> = 1 or 2

:TRIGger:EINterval:EVENT<x>:LOGic:CLOCK:POLarity

Function Sets the polarity of the logic trigger clock or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
CLOCK:POLarity {FALL|RISE}
:TRIGger:EINterval:EVENT<x>:LOGic:
CLOCK:POLarity?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:
CLOCK:POLARITY FALL
:TRIGGER:EINTERVAL:EVENT1:LOGIC:
CLOCK:POLARITY? -> :TRIGGER:EINTERVAL:
EVENT1:LOGIC:CLOCK:POLARITY FALL

:TRIGger:EINterval:EVENT<x>:LOGic:CLOCK:SOURCE

Function Sets the clock source of the logic trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
CLOCK:SOURCE {A<y>|B<y>|C<y>|D<y>|
DONTcare}
:TRIGger:EINterval:EVENT<x>:LOGic:
CLOCK:SOURCE?
<x> = 1 or 2
<y> = 0 to 7

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:
CLOCK:SOURCE A0
:TRIGGER:EINTERVAL:EVENT1:LOGIC:
CLOCK:SOURCE? -> :TRIGGER:EINTERVAL:
EVENT1:LOGIC:CLOCK:SOURCE A0

Description On 16-bit models, you can only select
{A<y>|C<y>|DONTcare}.

:TRIGger:EINterval:EVENT<x>:LOGic:ESTate?

Function Queries all settings related to the edge/state trigger of the logic.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
ESTate?
<x> = 1 or 2

**:TRIGger:EINterval:EVENT<x>:LOGic:
ESTate:POLarity**

Function Sets the polarity of the edge/state trigger of the logic or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
ESTate:POLarity {ENTER|EXIT|FALL|RISE}
:TRIGger:EINterval:EVENT<x>:LOGic:
ESTate:POLarity?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:
ESTATE:POLARITY ENTER
:TRIGGER:EINTERVAL:EVENT1:LOGIC:
ESTATE:POLARITY? -> :TRIGGER:EINTERVAL:
EVENT1:LOGIC:
ESTATE:POLARITY ENTER

Description • {ENTER|EXIT} is valid if :TRIGger:EINterval:
EVENT<x>:TYPE LSTate.
• {FALL|RISE} is valid if not :TRIGger:
EINterval:EVENT<x>:TYPE LSTate.

**:TRIGger:EINterval:EVENT<x>:LOGic:
ESTate:SOURce**

Function Sets the edge/state trigger source of the logic or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
ESTate:SOURce {A<y>|B<y>|C<y>|D<y>}
:TRIGger:EINterval:EVENT<x>:LOGic:
ESTate:SOURce?
<x> = 1 or 2
<y> = 0 to 7

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:
ESTATE:SOURCE A0
:TRIGGER:EINTERVAL:EVENT1:LOGIC:
ESTATE:SOURCE? -> :TRIGGER:EINTERVAL:
EVENT1:LOGIC:ESTATE:SOURCE A0

Description On 16-bit models, you can only select {A<x>|C<x>}.

**:TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern? (Serial Pattern)**

Function Queries all settings related to the logic serial pattern trigger of each event.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern?
<x> = 1 or 2

**:TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern:BITRate**

Function Sets the bit rate for the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern:BITRate {<NRF>}
:TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern:BITRate?
<x> = 1 or 2
<NRF>=1 to 50M(bps)

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:
SPATTERN:BITRATE 1
:TRIGGER:EINTERVAL:EVENT1:LOGIC:
SPATTERN:BITRATE?
-> :TRIGGER:EINTERVAL:EVENT1:LOGIC:
SPATTERN:BITRATE 1.000E+00

Description This command is valid when :TRIGger:
EINterval:EVENT<x>:LOGic:SPATtern:
CLOCK:MODE OFF.

**:TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern:CLEar**

Function Clears (set to don't care) all patterns of the logic serial pattern trigger.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern:CLEar
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:
SPATTERN:CLEAR

**:TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern:CLOCK?**

Function Queries all settings related to the clock for the logic serial pattern trigger.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern:CLOCK?
<x> = 1 or 2

**:TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern:CLOCK:MODE**

Function Enables/disables the clock for the logic serial analysis pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern:CLOCK:MODE {<Boolean>}
:TRIGger:EINterval:EVENT<x>:LOGic:
SPATtern:CLOCK:MODE?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:
SPATTERN:CLOCK:MODE ON
:TRIGGER:EINTERVAL:EVENT1:LOGIC:
SPATTERN:CLOCK:MODE?
-> :TRIGGER:EINTERVAL:EVENT1:LOGIC:
SPATTERN:CLOCK:MODE 1

5.30 TRIGger Group

:TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CLOCK:POLarity

Function Sets the polarity of the clock trace of the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CLOCK:POLarity {FALL|RISE}
:TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CLOCK:POLarity?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:CLOCK:POLARITY FALL
:TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:CLOCK:POLARITY?
-> :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:CLOCK:POLARITY FALL

Description This command is valid when :TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CLOCK:MODE ON.

:TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CLOCK:SOURce

Function Sets the clock trace for the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CLOCK:SOURce {A<y>|B<y>|C<y>|D<y>}
:TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CLOCK:SOURce?
<x> = 1 or 2
<y> = 0 to 7

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:CLOCK:SOURCE A0
:TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:CLOCK:SOURCE?
-> :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:CLOCK:SOURCE A0

Description • This command is valid when :TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CLOCK:MODE ON.
• On 16-bit models, you can only select {A<x>|C<x>}.

:TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CS

Function Enables/disables the chip select for the logic serial analysis pattern trigger or queries the current setting.

Syntax :TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CS {<Boolean>}
:TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CS?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:CS ON
:TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:CS?
-> :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:CS 1

Description This command is valid when :TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:CLOCK:MODE ON

:TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:DATA?

Function Queries all settings related to the data for the logic serial pattern trigger.

Syntax :TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:DATA?
<x> = 1 or 2

:TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:DATA:ACTive

Function Sets the active level of the data for the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:DATA:ACTive {HIGH|LOW}
:TRIGger:EINTerval:EVENT<x>:LOGic:SPATtern:DATA:ACTive?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:DATA:ACTIVE HIGH
:TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:DATA:ACTIVE?
-> :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:DATA:ACTIVE HIGH

:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:DATA:SOURce

Function Sets the data rate for the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:DATA:SOURce {A<y>|B<y>|C<y>|D<y>}
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:DATA:SOURce?
<x> = 1 or 2
<y> = 0 to 7

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:DATA:SOURCE A0
:TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:DATA:SOURCE?
-> :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:DATA:SOURCE A0

Description On 16-bit models, you can only select {A<x>|C<x>}.

:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:HEXA

Function Sets the pattern of the logic serial pattern trigger in hexadecimal notation.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:HEXA {<string>}
<x> = 1 or 2
<string> = combination of up to 32 characters (0-F and X)

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:HEXA "ABCD"

:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:LATCh?

Function Queries all settings related to the latch for the logic serial pattern trigger.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:LATCh?
<x> = 1 or 2

:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:LATCh:POLarity

Function Sets the polarity of the latch trace of the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:LATCh:POLarity {FALL|RISE}
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:LATCh:POLarity?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:LATCH:POLARITY FALL
:TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:LATCH:POLARITY?
-> :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:LATCH:POLARITY FALL

Description • This command is valid when :TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:CLOCK:MODE ON

• This command is valid when :TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:LATCh:SOURce DONTcare

:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:LATCh:SOURce

Function Sets the latch trace for the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:LATCh:SOURce {A<y>|B<y>|C<y>|D<y>|DONTcare}
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:LATCh:SOURce?
<x> = 1 or 2
<y> = 0 to 7

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:LATCH:SOURCE A0
:TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:LATCH:SOURCE?
-> :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:LATCH:SOURCE A0

Description • This command is valid when :TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:CLOCK:MODE ON

• On 16-bit models, you can only select {A<y>|C<y>|DONTcare}.

5.30 TRIGger Group

:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:PATtern

Function Sets the pattern of the logic serial pattern trigger in binary notation, or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:PATtern {<string>}
:TRIGger:EINterval:EVENT<x>:LOGic:SPATtern:PATtern?
<x> = 1 or 2
<string> = combination of up to 128 characters (0, 1, and X)

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:PATTERN "1100110111101111"
:TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:PATTERN?
-> :TRIGGER:EINTERVAL:EVENT1:LOGIC:SPATTERN:PATTERN "1100110111101111"

:TRIGger:EINterval:EVENT<x>:LOGic:STATE?

Function Queries all settings related to the logic state trigger.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:STATE?
<x> = 1 or 2

:TRIGger:EINterval:EVENT<x>:LOGic:STATE:BIT?

Function Queries all settings related to the bit of the logic state trigger.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:STATE:BIT?
<x> = 1 or 2

:TRIGger:EINterval:EVENT<x>:LOGic:STATE:BIT:{A<y>|B<y>|C<y>|D<y>}

Function Sets the condition to be satisfied for the bit of the logic state trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:STATE:BIT:{A<y>|B<y>|C<y>|D<y>} {DONTcare|HIGH|LOW}
:TRIGger:EINterval:EVENT<x>:LOGic:STATE:BIT:{A<y>|B<y>|C<y>|D<y>}?
<x> = 1 or 2
<y> = 0 to 7

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:BIT:A0 DONTCARE
:TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:BIT:A0? -> :TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:BIT:A0 DONTCARE

Description On 16-bit models, you can only select {A<x>|C<x>}.

:TRIGger:EINterval:EVENT<x>:LOGic:STATE:BIT:CLEAr

Function Clears the entire condition to be satisfied for the bit of the logic state trigger (set to don't care) or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:STATE:BIT:CLEAr
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:BIT:CLEAR

:TRIGger:EINterval:EVENT<x>:LOGic:STATE:BIT:LOGic

Function Sets the logic of the logic state trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:STATE:BIT:LOGic {AND|OR}
:TRIGger:EINterval:EVENT<x>:LOGic:STATE:BIT:LOGic?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:BIT:LOGIC AND
:TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:BIT:LOGIC? -> :TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:BIT:LOGIC AND

:TRIGger:EINterval:EVENT<x>:LOGic:STATE:GROup<x>?

Function Queries all settings related to the group of the logic state trigger.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:STATE:GROup<x>?
<x> of EVENT<x> = 1 or 2
<x> of GROup<x> = 1 to 5

:TRIGger:EINterval:EVENT<x>:LOGic:STATE:GROup<x>:CLEAr

Function Clears the entire condition to be satisfied for the group of the logic state trigger (set to don't care) or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:STATE:GROup<x>:CLEAr
<x> of EVENT<x> = 1 or 2
<x> of GROup<x> = 1 to 5

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:GROUP1:CLEAR

**:TRIGger:EINterval:EVENT<x>:LOGic:
STATe:GROup<x>:CONDition**

Function Sets the determination condition for the group of the logic state trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
STATe:GROup<x>:CONDition {DONTcare|
TRUE}
:TRIGger:EINterval:EVENT<x>:LOGic:
STATe:GROup<x>:CONDition?
<x> of EVENT<x> = 1 or 2
<x> of GROup<x> = 1 to 5

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:
GROUP1:CONDITION DONTCARE
:TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:
GROUP1:CONDITION? -> :TRIGGER:EINTERVAL:
EVENT1:LOGIC:STATE:GROUP1:
CONDITION DONTCARE

**:TRIGger:EINterval:EVENT<x>:LOGic:
STATe:GROup<x>:HEXA**

Function Sets the condition to be satisfied for the group of the logic state trigger in hexadecimal notation.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
STATe:GROup<x>:HEXA {<String>}
<x> of EVENT<x> = 1 or 2
<x> of GROup<x> = 1 to 5
<String> = Up to 8 characters by combining '0' to 'F'
and 'X'

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:
STATE:GROUP1:HEXA "1A3F24CD"

Description If the number of bit mappings specified with :LOGic:
GROup<x>:MAPPING is too large, the lower bits are
set to X. If the number is too small, the top bits are
set.

**:TRIGger:EINterval:EVENT<x>:LOGic:
STATe:GROup<x>:PATtern**

Function Sets the condition to be satisfied for the group of the logic state trigger in binary notation or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
STATe:GROup<x>:PATtern {<String>}
:TRIGger:EINterval:EVENT<x>:LOGic:
STATe:GROup<x>:PATtern?
<x> of EVENT<x> = 1 or 2
<x> of GROup<x> = 1 to 5
<String> = Up to 32 characters by combining '0', '1',
and 'X'

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:
GROUP1:PATTERN "11110000111100001111
000011110000"
:TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:
GROUP1:PATTERN? -> :TRIGGER:EINTERVAL:
EVENT1:LOGIC:STATE:GROUP1
PATTERN "11110000111100001111000011110
000"

**:TRIGger:EINterval:EVENT<x>:LOGic:
STATe:GROup<x>:SYMBOL**

Function Sets the symbol item for each group of the logic state trigger.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
STATe:GROup<x>:SYMBOL {<string>}
<x> of EVENT<x> = 1 or 2
<x> of GROup<x> = 1 to 5
<string> = 16 characters or fewer

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:
GROUP1:SYMBOL "TEST"

**:TRIGger:EINterval:EVENT<x>:LOGic:
STATe:TYPE**

Function Sets the setup type of the logic state trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
STATe:TYPE {BIT|GROup}
:TRIGger:EINterval:EVENT<x>:LOGic:
STATe:TYPE?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:
TYPE BIT
:TRIGGER:EINTERVAL:EVENT1:LOGIC:STATE:
TYPE? -> :TRIGGER:EINTERVAL:EVENT1:
LOGIC:STATE:TYPE BIT

**:TRIGger:EINterval:EVENT<x>:LOGic:
WIDTH?**

Function Queries all settings related to the logic pulse width trigger.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
WIDTH?
<x> = 1 or 2

**:TRIGger:EINterval:EVENT<x>:LOGic:
WIDTH:MODE**

Function Sets the determination mode of the logic pulse width trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:
WIDTH:MODE {BETween|IN|NOTBetween|
OUT|TIMEout}
:TRIGger:EINterval:EVENT<x>:LOGic:
WIDTH:MODE?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:WIDTH:
MODE BETWEEN
:TRIGGER:EINTERVAL:EVENT1:LOGIC:WIDTH:
MODE? -> :TRIGGER:EINTERVAL:EVENT1:
LOGIC:WIDTH:MODE BETWEEN

5.30 TRIGger Group

:TRIGger:EINterval:EVENT<x>:LOGic:WIDTh:POLarity

Function Sets the polarity of the logic pulse width trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:WIDTh:POLarity {FALSE|NEGative|POSitive|TRUE}
:TRIGger:EINterval:EVENT<x>:LOGic:WIDTh:POLarity?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:WIDTH:POLARITY FALSE
:TRIGGER:EINTERVAL:EVENT1:LOGIC:WIDTH:POLARITY? -> :TRIGGER:EINTERVAL:EVENT1:LOGIC:WIDTH:POLARITY FALSE

Description • {FALSE|TRUE} is valid if :TRIGger:EINterval:EVENT<x>:TYPE LPState.
• {NEGative|POSitive} is valid if :TRIGger:EINterval:EVENT<x>:TYPE LPULse.

:TRIGger:EINterval:EVENT<x>:LOGic:WIDTh:SOURce

Function Sets the trigger source of the logic pulse width trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:WIDTh:SOURce {A<y>|B<y>|C<y>|D<y>}
:TRIGger:EINterval:EVENT<x>:LOGic:WIDTh:SOURce?
<x> = 1 or 2
<y> = 0 to 7

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:WIDTH:SOURCE A0
:TRIGGER:EINTERVAL:EVENT1:LOGIC:WIDTH:SOURCE? -> :TRIGGER:EINTERVAL:EVENT1:LOGIC:WIDTH:SOURCE A0

Description On 16-bit models, you can only select {A<x>|C<x>}.

:TRIGger:EINterval:EVENT<x>:LOGic:WIDTh:TIME<x>

Function Sets the logic pulse width of the pulse width trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:LOGic:WIDTh:TIME<x> {<Time>}
:TRIGger:EINterval:EVENT<x>:LOGic:WIDTh:TIME<x>?
<x> of EVENT<x> = 1 or 2
<x> of TIME<x> = 1 or 2
<Time> = 1 ns to 10 s in 500-ps steps

Example :TRIGGER:EINTERVAL:EVENT1:LOGIC:WIDTH:TIME1 1S
:TRIGGER:EINTERVAL:EVENT1:LOGIC:WIDTH:TIME1? -> :TRIGGER:EINTERVAL:EVENT1:LOGIC:WIDTH:TIME1 1.000E+00

Description TIME2 is valid if :TRIGger:EINterval:EVENT<x>:WIDTh:MODE BETWEEN|NOTBetween.

:TRIGger:EINterval:EVENT<x>:SPATtern?(Serial Pattern)

Function Queries all settings related to the serial pattern trigger of the event.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern?
<x> = 1 or 2

:TRIGger:EINterval:EVENT<x>:SPATtern:BITRate

Function Sets the bit rate of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:BITRate {<NRf>}
:TRIGger:EINterval:EVENT<x>:SPATtern:BITRate?
<x> = 1 or 2
<NRf> = 1 to 50M (bps)

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:BITRATE 1
:TRIGGER:EINTERVAL:EVENT1:SPATTERN:BITRATE? -> :TRIGGER:EINTERVAL:EVENT1:SPATTERN:BITRATE 1.000E+00

Description This command is valid when :TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:MODE OFF.

:TRIGger:EINterval:EVENT<x>:SPATtern:CLEAr

Function Clears the entire pattern of the serial pattern trigger (to don't care).

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:CLEAr
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:CLEAR

:TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK?

Function Queries all settings related to clock of the serial pattern trigger.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK?
<x> = 1 or 2

:TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:MODE

Function Enables/Disables the clock of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:MODE {<Boolean>}
:TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:MODE?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:CLOCK:MODE ON
:TRIGGER:EINTERVAL:EVENT1:SPATTERN:CLOCK:MODE? -> :TRIGGER:EINTERVAL:EVENT1:SPATTERN:CLOCK:MODE 1

:TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:POLarity

Function Sets the polarity of the clock trace of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:POLarity {FALL|RISE}
:TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:POLarity?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:CLOCK:POLARITY FALL
:TRIGGER:EINTERVAL:EVENT1:SPATTERN:CLOCK:POLARITY? -> :TRIGGER:EINTERVAL:EVENT1:SPATTERN:CLOCK:POLARITY FALL

Description This command is valid when :TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:MODE ON.

:TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:SOURce

Function Sets the clock trace of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:SOURce {<NRF>}
:TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:SOURce?
<x> = 1 or 2
<NRF> = 1 to 4

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:CLOCK:SOURCE 1
:TRIGGER:EINTERVAL:EVENT1:SPATTERN:CLOCK:SOURCE? -> :TRIGGER:EINTERVAL:EVENT1:SPATTERN:CLOCK:SOURCE 1

Description This command is valid when :TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:MODE ON.

:TRIGger:EINterval:EVENT<x>:SPATtern:CS

Function Enables/Disables the chip select of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:CS {<Boolean>}
:TRIGger:EINterval:EVENT<x>:SPATtern:CS?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:CS ON
:TRIGGER:EINTERVAL:EVENT1:SPATTERN:CS?
-> :TRIGGER:EINTERVAL:EVENT1:SPATTERN:CS 1

Description This command is valid when :TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:MODE ON.

:TRIGger:EINterval:EVENT<x>:SPATtern:DATA?

Function Queries all settings related to data of the serial pattern trigger.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:DATA?
<x> = 1 or 2

:TRIGger:EINterval:EVENT<x>:SPATtern:DATA:ACTive

Function Sets the active level of the data of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:DATA:ACTive {HIGH|LOW}
:TRIGger:EINterval:EVENT<x>:SPATtern:DATA:ACTive?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:DATA:ACTIVE HIGH
:TRIGGER:EINTERVAL:EVENT1:SPATTERN:DATA:ACTIVE? -> :TRIGGER:EINTERVAL:EVENT1:SPATTERN:DATA:ACTIVE HIGH

:TRIGger:EINterval:EVENT<x>:SPATtern:DATA:SOURce

Function Sets the data trace of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:DATA:SOURce {<NRF>}
:TRIGger:EINterval:EVENT<x>:SPATtern:DATA:SOURce?
<x> = 1 or 2
<NRF> = 1 to 4

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:DATA:SOURCE 1
:TRIGGER:EINTERVAL:EVENT1:SPATTERN:DATA:SOURCE? -> :TRIGGER:EINTERVAL:EVENT1:SPATTERN:DATA:SOURCE 1

5.30 TRIGger Group

:TRIGger:EINterval:EVENT<x>:SPATtern:HEXA

Function Sets the pattern of the serial pattern trigger in hexadecimal notation.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:HEXA {<String>}
<x> = 1 or 2
<String> = Up to 32 characters by combining '0' to 'F' and 'X'

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:HEXA "ABCD"

:TRIGger:EINterval:EVENT<x>:SPATtern:LATCH?

Function Queries all settings related to latch of the serial pattern trigger.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:LATCH?
<x> = 1 or 2

:TRIGger:EINterval:EVENT<x>:SPATtern:LATCH:POLarity

Function Sets the polarity of the latch trace of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:LATCH:POLarity {FALL|RISE}
:TRIGger:EINterval:EVENT<x>:SPATtern:LATCH:POLarity?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:LATCH:POLARITY FALL
:TRIGGER:EINTERVAL:EVENT1:SPATTERN:LATCH:POLARITY? -> :TRIGGER:EINTERVAL:EVENT1:SPATTERN:LATCH:POLARITY FALL

Description • This command is valid when :TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:MODE ON.
• This command is invalid if :TRIGger:EINterval:EVENT<x>:SPATtern:LATCH:SOURCE NONE.

:TRIGger:EINterval:EVENT<x>:SPATtern:LATCH:SOURce

Function Sets the latch trace of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:LATCH:SOURce {<Nrf>|NONE}
:TRIGger:EINterval:EVENT<x>:SPATtern:LATCH:SOURce?
<x> = 1 or 2
<Nrf> = 1 to 4

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:LATCH:SOURCE 1
:TRIGGER:EINTERVAL:EVENT1:SPATTERN:LATCH:SOURCE? -> :TRIGGER:EINTERVAL:EVENT1:SPATTERN:LATCH:SOURCE 1

Description This command is valid when :TRIGger:EINterval:EVENT<x>:SPATtern:CLOCK:MODE ON.

:TRIGger:EINterval:EVENT<x>:SPATtern:PATTERN

Function Sets the pattern of the serial pattern trigger in binary notation or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:SPATtern:PATTERN {<String>}
:TRIGger:EINterval:EVENT<x>:SPATtern:PATTERN?
<x> = 1 or 2
<String> = Up to 128 characters by combining '0', '1', and 'X'

Example :TRIGGER:EINTERVAL:EVENT1:SPATTERN:PATTERN "1100110111101111"
:TRIGGER:EINTERVAL:EVENT1:SPATTERN:PATTERN? -> :TRIGGER:EINTERVAL:EVENT1:SPATTERN:PATTERN "1100110111101111"

:TRIGger:EINterval:EVENT<x>:STATE?

Function Queries all settings related to condition to be satisfied of the event.

Syntax :TRIGger:EINterval:EVENT<x>:STATE?
<x> = 1 or 2

:TRIGger:EINTerval:EVENT<x>:STATE:CHANnel<x>

Function Sets the condition to be satisfied of the channel or queries the current setting.

Syntax :TRIGger:EINTerval:EVENT<x>:STATE:CHANnel<x> {DONTcare|HIGH|IN|LOW|OUT}
:TRIGger:EINTerval:EVENT<x>:STATE:CHANnel<x>?
<x> of EVENT<x> = 1 or 2
<x> of CHANnel<x> = 1 to 4

Example :TRIGGER:EINTerval:EVENT1:STATE:CHANNEL1 HIGH
:TRIGGER:EINTerval:EVENT1:STATE:CHANNEL1? -> :TRIGGER:EINTerval:EVENT1:STATE:CHANNEL1 HIGH

Description • This command is valid when :TRIGger:EINTerval:EVENT<x>:TYPE EQUalify|I2Cbus|PQUalify|PState|SPATtern|STATE.
• {HIGH|LOW} is valid when :TRIGger:EINTerval:EVENT<x>:TYPE I2Cbus|SPATtern.
• {IN|OUT} is valid when :TRIGger:EINTerval:EVENT<x>:TYPE EQUalify|PQUalify|PState|STATE and TRIGger:SOURce:CHANnel<x>:WINDow ON. {HIGH|LOW} is valid when :TRIGger:EINTerval:EVENT<x>:TYPE EQUalify|PQUalify|PState|STATE and TRIGger:SOURce:CHANnel<x>:WINDow OFF.

:TRIGger:EINTerval:EVENT<x>:STATE:LOGic

Function Sets the logic of the condition to be satisfied or queries the current setting.

Syntax :TRIGger:EINTerval:EVENT<x>:STATE:LOGic {AND|OR}
:TRIGger:EINTerval:EVENT<x>:STATE:LOGic?
<x> = 1 or 2

Example :TRIGGER:EINTerval:EVENT1:STATE:LOGIC AND
:TRIGGER:EINTerval:EVENT1:STATE:LOGIC?
-> :TRIGGER:EINTerval:EVENT1:STATE:LOGIC AND

Description This command is valid when :TRIGger:EINTerval:EVENT<x>:TYPE EQUalify|I2Cbus|PQUalify|PState|SPATtern|STATE.

:TRIGger:EINTerval:EVENT<x>:TYPE

Function Sets the trigger type of the event or queries the current setting.

Syntax :TRIGger:EINTerval:EVENT<x>:TYPE {CANBus|EDGE|EQUalify|I2Cbus|LINbus|LI2Cbus|LLINbus|LSPATtern|LSPiBus|LPState|LPULse|LQUalify|LState|PQUalify|PState|PULSe|SPATtern|SPiBus|STATE}
:TRIGger:EINTerval:EVENT<x>:TYPE?
<x> = 1 or 2

Example :TRIGGER:EINTerval:EVENT1:TYPE CANBUS
:TRIGGER:EINTerval:EVENT1:TYPE?
-> :TRIGGER:EINTerval:EVENT1:TYPE CANBUS

Description {LI2Cbus|LLINbus|LSPATtern|LSPiBus|LPState|LPULse|LQUalify|LState} are only available on the DLM6000.

:TRIGger:EINTerval:EVENT<x>:WIDTH?

Function Queries all settings related to the pulse width trigger of the event.

Syntax :TRIGger:EINTerval:EVENT<x>:WIDTH?
<x> = 1 or 2

:TRIGger:EINTerval:EVENT<x>:WIDTH:MODE

Function Sets the determination mode of the pulse width trigger or queries the current setting.

Syntax :TRIGger:EINTerval:EVENT<x>:WIDTH:MODE {BETween|IN|NOTBetween|OUT|TIMEout}
:TRIGger:EINTerval:EVENT<x>:WIDTH:MODE?
<x> = 1 or 2

Example :TRIGGER:EINTerval:EVENT1:WIDTH:MODE TIMEOUT
:TRIGGER:EINTerval:EVENT1:WIDTH:MODE?
-> :TRIGGER:EINTerval:EVENT1:WIDTH:MODE TIMEOUT

5.30 TRIGger Group

:TRIGger:EINterval:EVENT<x>:WIDTH:POLarity

Function Sets the polarity of the pulse width trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:WIDTH:
POLarity {FALSE|IN|NEGative|OUT|
POSitive|TRUE}
:TRIGger:EINterval:EVENT<x>:WIDTH:
POLarity?
<x> = 1 or 2

Example :TRIGGER:EINTERVAL:EVENT1:WIDTH:
POLARITY POSITIVE
:TRIGGER:EINTERVAL:EVENT1:WIDTH:
POLARITY? -> :TRIGGER:EINTERVAL:EVENT1:
WIDTH:POLARITY POSITIVE

Description • {IN|OUT} is valid when :TRIGger:EINterval:
EVENT<x>:TYPE PQualify|PULSe and :
TRIGger:SOURce:CHANnel<x>:WINDow ON.
{POSitive|NEGative} is valid when :TRIGger:
EINterval:EVENT<x>:TYPE PQualify|PULSe
and :TRIGger:SOURce:CHANnel<x>:WINDow
OFF.
• {FALSE|TRUE} is valid when :TRIGger:
EINterval:EVENT<x>:TYPE PState.

:TRIGger:EINterval:EVENT<x>:WIDTH:SOURce

Function Sets the trigger source of the pulse width trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:WIDTH:
SOURce {<NRf>|EXternal}
:TRIGger:EINterval:EVENT<x>:WIDTH:
SOURce?
<x> = 1 or 2
<NRf> = 1 to 4

Example :TRIGGER:EINTERVAL:EVENT1:WIDTH:
SOURCE EXTERNAL
:TRIGGER:EINTERVAL:EVENT1:WIDTH:SOURCE?
-> :TRIGGER:EINTERVAL:EVENT1:WIDTH:
SOURCE EXTERNAL

Description This command is valid when :TRIGger:
EINterval:EVENT<x>:TYPE PQualify|PULSe.

:TRIGger:EINterval:EVENT<x>:WIDTH:TIME<x>

Function Sets the pulse width of the pulse width trigger or queries the current setting.

Syntax :TRIGger:EINterval:EVENT<x>:WIDTH:
TIME<x> {<Time>}
:TRIGger:EINterval:EVENT<x>:WIDTH:
TIME<x>?
<x> of EVENT<x> = 1 or 2
<x> of TIME<x> = 1 or 2
<Time> = 1 ns to 10 s in 500-ps steps

Example :TRIGGER:EINTERVAL:EVENT1:WIDTH:
TIME1 1S
:TRIGGER:EINTERVAL:EVENT1:WIDTH:TIME1?
-> :TRIGGER:EINTERVAL:EVENT1:WIDTH:
TIME1 1.000E+00

Description TIME2 is valid when :TRIGger:EINterval:
EVENT<x>:WIDTH:MODE BETWEEN|NOTBetween.

:TRIGger:EINterval:MODE

Function Sets the determination mode of the event interval or queries the current setting.

Syntax :TRIGger:EINterval:MODE {BETween|IN|
NOTBetween|OUT|TIMEout}
:TRIGger:EINterval:MODE?

Example :TRIGGER:EINTERVAL:MODE BETWEEN
:TRIGGER:EINTERVAL:MODE? -> :TRIGGER:
EINTERVAL:MODE BETWEEN

:TRIGger:EINterval:TIME<x>

Function Sets the interval time of the event interval or queries the current setting.

Syntax :TRIGger:EINterval:TIME<x> {<Time>}
:TRIGger:EINterval:TIME<x>?
<x> = 1 or 2
<Time> = 1.5 ns to 10 s in 500-ps steps

Example :TRIGGER:EINTERVAL:TIME1 1S
:TRIGGER:EINTERVAL:TIME1? -> :TRIGGER:
EINTERVAL:TIME1 1.000E+00

Description • TIME2 is valid when :TRIGger:EINterval:
MODE BETWEEN|NOTBetween.
• If you specify EIDelay or EISequence with the
:TRIGger:TYPE command and mix an analog
signal trigger and logic signal trigger with EVENT1
and EVENT2 of the :TRIGger:EINterval:
EVENT<x>:TYPE command, the minimum interval
time setting is 1.5 ns to 20 ns.

:TRIGger:EINterval:TRY?

Function Queries all settings related to the event interval trial.

Syntax :TRIGger:EINterval:TRY?

:TRIGger:EINterval:TRY:MODE

Function Sets the trial mode or queries the current setting.

Syntax `:TRIGger:EINterval:TRY:MODE {<Boolean>}`
`:TRIGger:EINterval:TRY:MODE?`

Example `:TRIGGER:EINTERVAL:TRY:MODE ON`
`:TRIGGER:EINTERVAL:TRY:MODE?`
`-> :TRIGGER:EINTERVAL:TRY:MODE 1`

Description This command is valid when `:TRIGger:EINterval:MODE BETWEEN|NOTBetween`.

:TRIGger:EINterval:TRY:SElect

Function Sets the source event of the trial mode or queries the current setting.

Syntax `:TRIGger:EINterval:TRY:SElect {<Nrf>}`
`:TRIGger:EINterval:TRY:SElect?`
`<Nrf> = 1 or 2`

Example `:TRIGGER:EINTERVAL:TRY:SELECT 1`
`:TRIGGER:EINTERVAL:TRY:SELECT?`
`-> :TRIGGER:EINTERVAL:TRY:SELECT 1`

Description This command is valid when `:TRIGger:EINterval:MODE BETWEEN|NOTBetween`.

:TRIGger:ENHanced?

Function Queries all settings related to the enhanced trigger.

Syntax `:TRIGger:ENHanced?`

:TRIGger:ENHanced:SPATtern? (Serial Pattern)

Function Queries all settings related to the serial pattern trigger.

Syntax `:TRIGger:ENHanced:SPATtern?`

:TRIGger:ENHanced:SPATtern:BITRate

Function Sets the bit rate of the serial pattern trigger or queries the current setting.

Syntax `:TRIGger:ENHanced:SPATtern:BITRate {<Nrf>}`
`:TRIGger:ENHanced:SPATtern:BITRate?`
`<Nrf> = 1 to 50M (bps)`

Example `:TRIGGER:ENHANCED:SPATTERN:BITRATE 1`
`:TRIGGER:ENHANCED:SPATTERN:BITRATE?`
`-> :TRIGGER:ENHANCED:SPATTERN:BITRATE 1.000E+00`

Description This command is valid when `:TRIGger:ENHanced:SPATtern:CLOCK:MODE OFF`.

:TRIGger:ENHanced:SPATtern:CLEar

Function Clears the entire pattern of the serial pattern trigger (to don't care).

Syntax `:TRIGger:ENHanced:SPATtern:CLEar`

Example `:TRIGGER:ENHANCED:SPATTERN:CLEAR`

:TRIGger:ENHanced:SPATtern:CLOCK?

Function Queries all settings related to clock of the serial pattern trigger.

Syntax `:TRIGger:ENHanced:SPATtern:CLOCK?`

:TRIGger:ENHanced:SPATtern:CLOCK:MODE

Function Enables/Disables the clock of the serial pattern trigger or queries the current setting.

Syntax `:TRIGger:ENHanced:SPATtern:CLOCK:MODE {<Boolean>}`
`:TRIGger:ENHanced:SPATtern:CLOCK:MODE?`

Example `:TRIGGER:ENHANCED:SPATTERN:CLOCK:MODE ON`
`:TRIGGER:ENHANCED:SPATTERN:CLOCK:MODE?`
`-> :TRIGGER:ENHANCED:SPATTERN:CLOCK:MODE 1`

:TRIGger:ENHanced:SPATtern:CLOCK:POLarity

Function Sets the polarity of the clock trace of the serial pattern trigger or queries the current setting.

Syntax `:TRIGger:ENHanced:SPATtern:CLOCK:POLarity {FALL|RISE}`
`:TRIGger:ENHanced:SPATtern:CLOCK:POLarity?`

Example `:TRIGGER:ENHANCED:SPATTERN:CLOCK:POLARITY FALL`
`:TRIGGER:ENHANCED:SPATTERN:CLOCK:POLARITY? -> :TRIGGER:ENHANCED:SPATTERN:CLOCK:POLARITY FALL`

Description This command is valid if `:TRIGger:ENHanced:SPATtern:CLOCK:MODE ON`.

:TRIGger:ENHanced:SPATtern:CLOCK:SOURce

Function Sets the clock trace of the serial pattern trigger or queries the current setting.

Syntax `:TRIGger:ENHanced:SPATtern:CLOCK:SOURce {<Nrf>}`
`:TRIGger:ENHanced:SPATtern:CLOCK:SOURce?`
`<Nrf> = 1 to 4`

Example `:TRIGGER:ENHANCED:SPATTERN:CLOCK:SOURCE 1`
`:TRIGGER:ENHANCED:SPATTERN:CLOCK:SOURCE? -> :TRIGGER:ENHANCED:SPATTERN:CLOCK:SOURCE 1`

Description This command is valid when `:TRIGger:ENHanced:SPATtern:CLOCK:MODE ON`.

:TRIGger:ENHanced:SPATtern:CS

Function Enables/Disables the chip select of the serial pattern trigger or queries the current setting.

Syntax `:TRIGger:ENHanced:SPATtern:CS {<Boolean>}`
`:TRIGger:ENHanced:SPATtern:CS?`

Example `:TRIGGER:ENHANCED:SPATTERN:CS ON`
`:TRIGGER:ENHANCED:SPATTERN:CS?`
`-> :TRIGGER:ENHANCED:SPATTERN:CS 1`

Description This command is valid when `:TRIGger:ENHanced:SPATtern:CLOCK:MODE ON`.

5.30 TRIGger Group

:TRIGger:ENHanced:SPATtern:DATA?

Function Queries all settings related to data of the serial pattern trigger.

Syntax :TRIGger:ENHanced:SPATtern:DATA?

:TRIGger:ENHanced:SPATtern:DATA:ACTive

Function Sets the active level of the data of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:ENHanced:SPATtern:DATA:
ACTive {HIGH|LOW}

:TRIGger:ENHanced:SPATtern:DATA:ACTive?

Example :TRIGGER:ENHANCED:SPATTERN:DATA:
ACTIVE HIGH
:TRIGGER:ENHANCED:SPATTERN:DATA:ACTIVE?
-> :TRIGGER:ENHANCED:SPATTERN:DATA:
ACTIVE HIGH

:TRIGger:ENHanced:SPATtern:DATA:SOURce

Function Sets the data trace of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:ENHanced:SPATtern:DATA:
SOURce {<Nrf>}
:TRIGger:ENHanced:SPATtern:DATA:SOURce?
<Nrf> = 1 to 4

Example :TRIGGER:ENHANCED:SPATTERN:DATA:
SOURCE 1
:TRIGGER:ENHANCED:SPATTERN:DATA:SOURCE?
-> :TRIGGER:ENHANCED:SPATTERN:DATA:
SOURCE 1

:TRIGger:ENHanced:SPATtern:HEXA

Function Sets the pattern of the serial pattern trigger in hexadecimal notation.

Syntax :TRIGger:ENHanced:SPATtern:
HEXA {<String>}
<String> = Up to 32 characters by combining '0' to 'F' and 'X'

Example :TRIGGER:ENHANCED:SPATTERN:HEXA "ABCD"

:TRIGger:ENHanced:SPATtern:LATCh?

Function Queries all settings related to latch of the serial pattern trigger.

Syntax :TRIGger:ENHanced:SPATtern:LATCh?

:TRIGger:ENHanced:SPATtern:LATCh:POLarity

Function Sets the polarity of the latch trace of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:ENHanced:SPATtern:LATCh:
POLarity {FALL|RISE}
:TRIGger:ENHanced:SPATtern:LATCh:
POLarity?

Example :TRIGGER:ENHANCED:SPATTERN:LATCH:
POLARITY FALL
:TRIGGER:ENHANCED:SPATTERN:LATCH:
POLARITY? -> :TRIGGER:ENHANCED:
SPATTERN:LATCH:POLARITY FALL

Description • This command is valid when :TRIGger:
ENHanced:SPATtern:CLOCK:MODE ON.
• This command is invalid if :TRIGger:ENHanced:
SPATtern:LATCh:SOURce NONE.

:TRIGger:ENHanced:SPATtern:LATCh:SOURce

Function Sets the latch trace of the serial pattern trigger or queries the current setting.

Syntax :TRIGger:ENHanced:SPATtern:LATCh:
SOURce {<Nrf>|NONE}
:TRIGger:ENHanced:SPATtern:LATCh:
SOURce?
<Nrf> = 1 to 4

Example :TRIGGER:ENHANCED:SPATTERN:LATCH:
SOURCE 1
:TRIGGER:ENHANCED:SPATTERN:LATCH:
SOURCE? -> :TRIGGER:ENHANCED:SPATTERN:
LATCH:SOURCE 1

Description This command is valid when :TRIGger:ENHanced:
SPATtern:CLOCK:MODE ON.

:TRIGger:ENHanced:SPATtern:PATtern

Function Sets the pattern of the serial pattern trigger in binary notation or queries the current setting.

Syntax :TRIGger:ENHanced:SPATtern:
PATtern {<String>}
:TRIGger:ENHanced:SPATtern:PATtern?
<String> = Up to 128 characters by combining '0', '1',
and 'X'

Example :TRIGGER:ENHANCED:SPATTERN:PATTERN
"1100110111101111"
:TRIGGER:ENHANCED:SPATTERN:PATTERN?
-> :TRIGGER:ENHANCED:SPATTERN:
PATTERN "1100110111101111"

:TRIGger:ENHanced:TV?

Function Queries all settings related to the TV trigger.

Syntax :TRIGger:ENHanced:TV?

:TRIGger:ENHanced:TV:COUPling?

Function Queries the trigger coupling of the TV trigger.

Syntax :TRIGger:ENHanced:TV:COUPling?

Example :TRIGGER:ENHANCED:TV:COUPLING?
-> :TRIGGER:ENHANCED:TV:COUPLING TV

:TRIGger:ENHanced:TV:CUSTomize

Function Turns ON/OFF the sync guard function of the TV trigger or queries the current setting.

Syntax :TRIGger:ENHanced:TV:
CUSTomize {<Boolean>}
:TRIGger:ENHanced:TV:CUSTomize?

Example :TRIGGER:ENHANCED:TV:CUSTOMIZE ON
:TRIGGER:ENHANCED:TV:CUSTOMIZE?
-> :TRIGGER:ENHANCED:TV:CUSTOMIZE 1

:TRIGger:ENHanced:TV:FIELD

Function Sets the field of the TV trigger or queries the current setting.

Syntax :TRIGger:ENHanced:TV:FIELD {DONTcare|
<Nrf>}
:TRIGger:ENHanced:TV:FIELD?
<Nrf> = 1 or 2

Example :TRIGGER:ENHANCED:TV:FIELD DONTCARE
:TRIGGER:ENHANCED:TV:FIELD?
-> :TRIGGER:ENHANCED:TV:FIELD DONTCARE

:TRIGger:ENHanced:TV:FRAME

Function Sets the frame skip function of the TV trigger or queries the current setting.

Syntax :TRIGger:ENHanced:TV:FRAME {<Nrf>}
:TRIGger:ENHanced:TV:FRAME?
<Nrf> = 1, 2, 4, or 8

Example :TRIGGER:ENHANCED:TV:FRAME 2
:TRIGGER:ENHANCED:TV:FRAME?
-> :TRIGGER:ENHANCED:TV:FRAME 2

:TRIGger:ENHanced:TV:{HDTV|NTSC|PAL|SDTV|USERdefine}?

Function Queries all settings related to the TV trigger mode.

Syntax :TRIGger:ENHanced:TV:{HDTV|NTSC|PAL|
SDTV|USERdefine}?

**:TRIGger:ENHanced:TV:{HDTV|NTSC|PAL|SDTV}:HFRejection?
(HighFrequencyREJECTION)**

Function Queries the low pass filter (HF rejection) of the TV trigger.

Syntax :TRIGger:ENHanced:TV:{HDTV|NTSC|
PAL|SDTV}:HFRejection?

Example (The following is an example for the HDTV.)
:TRIGGER:ENHANCED:TV:HDTV:HFREJECTION?
-> :TRIGGER:ENHANCED:TV:HDTV:
HFREJECTION OFF

:TRIGger:ENHanced:TV:{HDTV|NTSC|PAL|SDTV|USERdefine}:LINE

Function Sets the line for activating the TV trigger or queries the current setting.

Syntax :TRIGger:ENHanced:TV:{HDTV|NTSC|PAL|
SDTV|USERdefine}:LINE
:TRIGger:ENHanced:TV:{HDTV|NTSC|PAL|
SDTV|USERdefine}:LINE {<Nrf>}
<Nrf> = 2 to 2251 (for HDTV)
5 to 1054 (for NTSC)
2 to 1251 (for PAL)
8 to 2251 (for SDTV)
2 to 2251 (for USERdefine)

Example (The following is an example for the HDTV.)
:TRIGGER:ENHANCED:TV:HDTV:LINE 10
:TRIGGER:ENHANCED:TV:HDTV:LINE?
-> :TRIGGER:ENHANCED:TV:HDTV:LINE 10

:TRIGger:ENHanced:TV:{HDTV|NTSC|PAL|SDTV|USERdefine}:POLarity

Function Sets the input polarity of the TV trigger or queries the current setting.

Syntax :TRIGger:ENHanced:TV:{HDTV|NTSC|PAL|
SDTV|USERdefine}:POLarity {NEGative|
POSitive}
:TRIGger:ENHanced:TV:{HDTV|NTSC|PAL|
SDTV|USERdefine}:POLarity?

Example (The following is an example for the HDTV.)
:TRIGGER:ENHANCED:TV:HDTV:
POLARITY NEGATIVE
:TRIGGER:ENHANCED:TV:HDTV:POLARITY?
-> :TRIGGER:ENHANCED:TV:HDTV:
POLARITY NEGATIVE

:TRIGger:ENHanced:TV:LEVel

Function Sets the trigger level of the TV trigger or queries the current setting.

Syntax :TRIGger:ENHanced:TV:LEVel {<Nrf>}
:TRIGger:ENHanced:TV:LEVel?
<Nrf> = 0.1 to 2.0 (div)

Example :TRIGGER:ENHANCED:TV:LEVEL 1
:TRIGGER:ENHANCED:TV:LEVEL?
-> :TRIGGER:ENHANCED:TV:LEVEL 1.000E+00

5.30 TRIGger Group

:TRIGger:ENHanced:TV:SGUard

Function Sets the sync guard of the TV trigger or queries the current setting.

Syntax :TRIGger:ENHanced:TV:SGUard {<NRf>}
:TRIGger:ENHanced:TV:SGUard?
<NRf> = 60 to 90 (%)

Example :TRIGGER:ENHANCED:TV:SGUARD 60
:TRIGGER:ENHANCED:TV:SGUARD?
-> :TRIGGER:ENHANCED:TV:SGUARD 60

Description This command is valid when :TRIGGER:ENHANCED:TV:TYPE HDTV|NTSC|PAL.

:TRIGger:ENHanced:TV:SOURce

Function Sets the trigger source of the TV trigger or queries the current setting.

Syntax :TRIGger:ENHanced:TV:SOURce {<NRf>}
:TRIGger:ENHanced:TV:SOURce?
<NRf> = 1 to 4

Example :TRIGGER:ENHANCED:TV:SOURCE 1
:TRIGGER:ENHANCED:TV:SOURCE?
-> :TRIGGER:ENHANCED:TV:SOURCE 1

:TRIGger:ENHanced:TV:TYPE

Function Sets the input type of the TV trigger or queries the current setting.

Syntax :TRIGger:ENHanced:TV:TYPE {HDTV|NTSC|PAL|SDTV|USERdefine,I1080_50|I1080_60|P1080_24|P1080_25|P1080_60|P720_60|SF1080_24}
:TRIGger:ENHanced:TV:TYPE?

Example :TRIGGER:ENHANCED:TV:TYPE NTSC
:TRIGGER:ENHANCED:TV:TYPE? -> TRIGGER:ENHANCED:TV:TYPE NTSC

Description For {HDTV}, select the next {I1080_50|I1080_60|P1080_24|P1080_25|P1080_60|P720_60|SF1080_24}. If not selected {I1080_60} is selected automatically.

:TRIGger:ENHanced:TV:USERdefine:DEFinition

Function Sets the user-defined resolution or queries the current setting.

Syntax :TRIGger:ENHanced:TV:USERdefine:DEFinition {HD|SD}
:TRIGger:ENHanced:TV:USERdefine:DEFinition?

Example :TRIGGER:ENHANCED:TV:USERDEFINE:DEFINITION HD
:TRIGGER:ENHANCED:TV:USERDEFINE:DEFINITION? -> :TRIGGER:ENHANCED:TV:USERDEFINE:DEFINITION HD

:TRIGger:ENHanced:TV:USERdefine:

HFRejection (HighFrequencyREJECTION)

Function Sets the user-defined low pass filter (HF rejection) or queries the current setting.

Syntax :TRIGger:ENHanced:TV:USERdefine:HFRejection {<Frequency>|OFF}
:TRIGger:ENHanced:TV:USERdefine:HFRejection?
<Frequency> = 300kHz

Example :TRIGGER:ENHANCED:TV:USERDEFINE:HFREJECTION OFF
:TRIGGER:ENHANCED:TV:USERDEFINE:HFREJECTION? -> :TRIGGER:ENHANCED:TV:USERDEFINE:HFREJECTION OFF

:TRIGger:ENHanced:TV:USERdefine:

HSYNc (Hsync Freq)

Function Sets the user-defined horizontal sync signal or queries the current setting.

Syntax :TRIGger:ENHanced:TV:USERdefine:HSYNc {<Frequency>}
:TRIGger:ENHanced:TV:USERdefine:HSYNc?
<Frequency> = 10k to 200k (Hz)

Example :TRIGGER:ENHANCED:TV:USERDEFINE:HSYNC 10KHZ
:TRIGGER:ENHANCED:TV:USERDEFINE:HSYNC?
-> :TRIGGER:ENHANCED:TV:USERDEFINE:HSYNC 10.00E+03

:TRIGger:ESTate?

Function Queries all settings related to the edge/state trigger.

Syntax :TRIGger:ESTate?

:TRIGger:ESTate:EOR?

Function Queries all settings related to the OR trigger.

Syntax :TRIGger:ESTate:EOR?

:TRIGger:ESTate:EOR:CHANnel<x>

Function Sets the channel polarity of the OR trigger or queries the current setting.

Syntax :TRIGger:ESTate:EOR:CHANnel<x> {DONTcare|ENTER|EXIT|FALL|RISE}
:TRIGger:ESTate:EOR:CHANnel<x>?
<x> = 1 to 4

Example :TRIGGER:ESTATE:EOR:CHANNEL1 DONTCARE
:TRIGGER:ESTATE:EOR:CHANNEL1? -> :TRIGGER:ESTATE:EOR:CHANNEL1 DONTCARE

Description • This command is valid when :TRIGger:TYPE EOR.
• {ENTER|EXIT} is valid when :TRIGger:SOURce:CHANnel<x>:WINDOW ON. For all other cases, {FALL|RISE} is valid.

:TRIGger:ESTate:POLarity

Function Sets the polarity of the edge/state trigger or queries the current setting.

Syntax :TRIGger:ESTate:POLarity {ENTer|EXIT|FALL|RISE}
:TRIGger:ESTate:POLarity?

Example :TRIGGER:ESTATE:POLARITY ENTER
:TRIGGER:ESTATE:POLARITY? -> :TRIGGER:ESTATE:POLARITY ENTER

Description • This command is valid when :TRIGger:TYPE EDGE|EQUalify|STATE.
• This command is invalid when :TRIGger:TYPE EDGE and :TRIGger:ESTate:SOURce LINE.
• {ENTer|EXIT} is valid when :TRIGger:TYPE EDGE|EQUalify and :TRIGger:SOURce:CHANnel<x>:WINDow ON. {FALL|RISE} is valid when :TRIGger:TYPE EDGE|EQUalify and :TRIGger:SOURce:CHANnel<x>:WINDow OFF.
• {ENTer|EXIT} is valid when :TRIGger:TYPE STATE.

:TRIGger:ESTate:SOURce

Function Sets the trigger source of the edge/state trigger or queries the current setting.

Syntax :TRIGger:ESTate:SOURce {<NRF>|EXTErnal|LINE}
:TRIGger:ESTate:SOURce?
<NRF> = 1 to 4

Example :TRIGGER:ESTATE:SOURCE EXTERNAL
:TRIGGER:ESTATE:SOURCE? -> :TRIGGER:ESTATE:SOURCE EXTERNAL

Description • This command is valid when :TRIGger:TYPE EDGE|EQUalify.
• {<NRF>|EXTErnal|LINE} is valid when :TRIGger:TYPE EDGE.
• {<NRF>|EXTErnal} is valid when :TRIGger:TYPE EQUalify.

:TRIGger:HOLDoff

Function Sets the hold off time or queries the current setting.

Syntax :TRIGger:HOLDoff {<Time>}
:TRIGger:HOLDoff?

<Time> = 20 ns to 10 s in 5-ns steps
Example :TRIGGER:HOLDOFF 1S
:TRIGGER:HOLDOFF?
-> :TRIGGER:HOLDOFF 1.000E+00

:TRIGger:LOGic?

Function Queries all settings related to the logic trigger.

Syntax :TRIGger:LOGic?

:TRIGger:LOGic:CLOCK?

Function Queries all settings related to the logic trigger clock.

Syntax :TRIGger:LOGic:CLOCK?

:TRIGger:LOGic:CLOCK:POLarity

Function Sets the polarity of the logic trigger clock or queries the current setting.

Syntax :TRIGger:LOGic:CLOCK:POLarity {FALL|RISE}
:TRIGger:LOGic:CLOCK:POLarity?

Example :TRIGGER:LOGIC:CLOCK:POLARITY FALL
:TRIGGER:LOGIC:CLOCK:POLARITY?
-> :TRIGGER:LOGIC:CLOCK:POLARITY FALL

:TRIGger:LOGic:CLOCK:SOURce

Function Sets the clock source of the logic trigger or queries the current setting.

Syntax :TRIGger:LOGic:CLOCK:SOURce {A<x>|B<x>|C<x>|D<x>|DONTcare}
:TRIGger:LOGic:CLOCK:SOURce?
<x> = 0 to 7

Example :TRIGGER:LOGIC:CLOCK:SOURCE A0
:TRIGGER:LOGIC:CLOCK:SOURCE?
-> :TRIGGER:LOGIC:CLOCK:SOURCE A0

Description On 16-bit models, you can only select {A<x>|C<x>|DONTcare}.

:TRIGger:LOGic:ESTate?

Function Queries all settings related to the edge qualify/state trigger of the logic.

Syntax :TRIGger:LOGic:ESTate?

:TRIGger:LOGic:ESTate:POLarity

Function Sets the polarity of the edge qualify/state trigger of the logic or queries the current setting.

Syntax :TRIGger:LOGic:ESTate:POLarity {ENTer|EXIT|FALL|RISE}
:TRIGger:LOGic:ESTate:POLarity?

Example :TRIGGER:LOGIC:ESTATE:POLARITY ENTER
:TRIGGER:LOGIC:ESTATE:POLARITY?
-> :TRIGGER:LOGIC:ESTATE:POLARITY ENTER

Description • {ENTer|EXIT} is valid if :TRIGger:TYPE LState.
• {FALL|RISE} is valid if not :TRIGger:TYPE LState.

:TRIGger:LOGic:ESTate:SOURce

Function Sets the edge qualify/state trigger source of the logic or queries the current setting.

Syntax :TRIGger:LOGic:ESTate:SOURce {A<x>|B<x>|C<x>|D<x>}
:TRIGger:LOGic:ESTate:SOURce?
<x> = 0 to 7

Example :TRIGGER:LOGIC:ESTATE:SOURCE A0
:TRIGGER:LOGIC:ESTATE:SOURCE?
-> :TRIGGER:LOGIC:ESTATE:SOURCE A0

Description • On 16-bit models, you can only select {A<x>|C<x>}.
• You can set or query the logic edge trigger source by using the :TRIGger:EDGE:SOURce command.

5.30 TRIGger Group

:TRIGger:LOGic:SPATtern? (Serial Pattern)

Function Queries all settings related to logic serial pattern trigger.

Syntax :TRIGger:LOGic:SPATtern?

:TRIGger:LOGic:SPATtern:BITRate

Function Sets the bit rate for the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:LOGic:SPATtern:BITRate {<NRf>}
:TRIGger:LOGic:SPATtern:BITRate?
<NRf> = 1 to 50M(bps)

Example :TRIGGER:LOGIC:SPATTERN:BITRATE 1
:TRIGGER:LOGIC:SPATTERN:BITRATE?
-> :TRIGGER:LOGIC:SPATTERN:
BITRATE 1.000E+00

Description This command valid when :TRIGger:LOGic:SPATtern:CLOCK:MODE OFF.

:TRIGger:LOGic:SPATtern:CLEar

Function Clears (set to don't care) all patterns of the logic serial pattern trigger.

Syntax :TRIGger:LOGic:SPATtern:CLEar

Example :TRIGGER:LOGIC:SPATTERN:CLEAR

:TRIGger:LOGic:SPATtern:CLOCK?

Function Queries all settings related to the clock for the logic serial pattern trigger.

Syntax :TRIGger:LOGic:SPATtern:CLOCK?

:TRIGger:LOGic:SPATtern:CLOCK:MODE

Function Enables/disables the clock for the logic serial analysis pattern trigger or queries the current setting.

Syntax :TRIGger:LOGic:SPATtern:CLOCK:
MODE {<Boolean>}
:TRIGger:LOGic:SPATtern:CLOCK:MODE?

Example :TRIGGER:LOGIC:SPATTERN:CLOCK:MODE ON
:TRIGGER:LOGIC:SPATTERN:CLOCK:MODE?
-> :TRIGGER:LOGIC:SPATTERN:CLOCK:MODE 1

:TRIGger:LOGic:SPATtern:CLOCK:POLarity

Function Sets the polarity of the clock trace of the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:LOGic:SPATtern:CLOCK:
POLarity {FALL|RISE}
:TRIGger:LOGic:SPATtern:CLOCK:POLarity?

Example :TRIGGER:LOGIC:SPATTERN:CLOCK:
POLARITY FALL
:TRIGGER:LOGIC:SPATTERN:CLOCK:POLARITY?
-> :TRIGGER:LOGIC:SPATTERN:CLOCK:
POLARITY FALL

Description This command valid when :TRIGger:LOGic:SPATtern:CLOCK:MODE ON.

:TRIGger:LOGic:SPATtern:CLOCK:SOURce

Function Sets the clock trace for the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:LOGic:SPATtern:CLOCK:
SOURce {A<x>|B<x>|C<x>|D<x>}
:TRIGger:LOGic:SPATtern:CLOCK:SOURce?
<x>= 0 to 7

Example :TRIGGER:LOGIC:SPATTERN:CLOCK:SOURCE A0
:TRIGGER:LOGIC:SPATTERN:CLOCK:SOURCE?
-> :TRIGGER:LOGIC:SPATTERN:CLOCK:
SOURCE A0

Description • This command valid when :TRIGger:LOGic:SPATtern:CLOCK:MODE ON.
• On 16-bit models, you can only select {A<x>|C<x>}.

:TRIGger:LOGic:SPATtern:CS

Function Enables/disables the chip select for the logic serial analysis pattern trigger or queries the current setting.

Syntax :TRIGger:LOGic:SPATtern:CS {<Boolean>}
:TRIGger:LOGic:SPATtern:CS?

Example :TRIGGER:LOGIC:SPATTERN:CS ON
:TRIGGER:LOGIC:SPATTERN:CS?
-> :TRIGGER:LOGIC:SPATTERN:CS 1

Description This command valid when :TRIGger:LOGic:SPATtern:CLOCK:MODE ON.

:TRIGger:LOGic:SPATtern:DATA?

Function Queries all settings related to the data for the logic serial pattern trigger.

Syntax :TRIGger:LOGic:SPATtern:DATA?

:TRIGger:LOGic:SPATtern:DATA:ACTIVE

Function Sets the active level of the data for the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:LOGic:SPATtern:DATA:
ACTIVE {HIGH|LOW}
:TRIGger:LOGic:SPATtern:DATA:ACTIVE?

Example :TRIGGER:LOGIC:SPATTERN:DATA:
ACTIVE HIGH
:TRIGGER:LOGIC:SPATTERN:DATA:ACTIVE?
-> :TRIGGER:LOGIC:SPATTERN:DATA:
ACTIVE HIGH

:TRIGger:LOGic:SPATtern:DATA:SOURce

Function Sets the data rate for the logic serial pattern trigger or queries the current setting.

Syntax :TRIGger:LOGic:SPATtern:DATA:
SOURce {A<x>|B<x>|C<x>|D<x>}
:TRIGger:LOGic:SPATtern:DATA:SOURce?
<x>= 0 to 7

Example :TRIGGER:LOGIC:SPATTERN:DATA:SOURCE A0
:TRIGGER:LOGIC:SPATTERN:DATA:SOURCE?
-> :TRIGGER:LOGIC:SPATTERN:DATA:
SOURCE A0

Description On 16-bit models, you can only select {A<x>|C<x>}.

:TRIGger:LOGic:SPATtern:HEXA

Function Sets the pattern of the logic serial pattern trigger in hexadecimal notation.

Syntax `:TRIGger:LOGic:SPATtern:HEXA {<string>}`
 <string> = combination of up to 32 characters (0-F and X)

Example `:TRIGGER:LOGIC:SPATTERN:HEXA "ABCD"`

:TRIGger:LOGic:SPATtern:LATCh?

Function Queries all settings related to the latch for the logic serial pattern trigger.

Syntax `:TRIGger:LOGic:SPATtern:LATCh?`

:TRIGger:LOGic:SPATtern:LATCh:POLarity

Function Sets the polarity of the latch trace of the logic serial pattern trigger or queries the current setting.

Syntax `:TRIGger:LOGic:SPATtern:LATCh:POLarity {FALL|RISE}`
`:TRIGger:LOGic:SPATtern:LATCh:POLarity?`

Example `:TRIGGER:LOGIC:SPATTERN:LATCH:POLARITY FALL`
`:TRIGGER:LOGIC:SPATTERN:LATCH:POLARITY?`
`-> :TRIGGER:LOGIC:SPATTERN:LATCH:POLARITY FALL`

Description • This command valid when `:TRIGger:LOGic:SPATtern:CLOCK:MODE ON`.
 • This command is invalid when `:TRIGger:LOGic:SPATtern:LATCh:SOURce DONTcare`

:TRIGger:LOGic:SPATtern:LATCh:SOURce

Function Sets the latch trace for the logic serial pattern trigger or queries the current setting.

Syntax `:TRIGger:LOGic:SPATtern:LATCh:SOURce {A<x>|B<x>|C<x>|D<x>|DONTcare}`
`:TRIGger:LOGic:SPATtern:LATCh:SOURce?`
 <x> = 0 to 7

Example `:TRIGGER:LOGIC:SPATTERN:LATCH:SOURCE A0`
`:TRIGGER:LOGIC:SPATTERN:LATCH:SOURCE?`
`-> :TRIGGER:LOGIC:SPATTERN:LATCH:SOURCE A0`

Description • This command valid when `:TRIGger:LOGic:SPATtern:CLOCK:MODE ON`.
 • On 16-bit models, you can only select `{A<x>|C<x>|DONTcare}`.

:TRIGger:LOGic:SPATtern:PATtern

Function Sets the pattern of the logic serial pattern trigger in binary notation, or queries the current setting.

Syntax `:TRIGger:LOGic:SPATtern:PATtern {<string>}`
`:TRIGger:LOGic:SPATtern:PATtern?`
 <string> = combination of up to 128 characters (0, 1, and X)

Example `:TRIGGER:LOGIC:SPATTERN:PATTERN "1100110111101111"`
`:TRIGGER:LOGIC:SPATTERN:PATTERN?`
`-> :TRIGGER:LOGIC:SPATTERN:PATTERN "1100110111101111"`

:TRIGger:LOGic:STATe?

Function Queries all settings related to the logic state trigger.

Syntax `:TRIGger:LOGic:STATe?`

:TRIGger:LOGic:STATe:BIT?

Function Queries all settings related to the bit of the logic state trigger.

Syntax `:TRIGger:LOGic:STATe:BIT?`

:TRIGger:LOGic:STATe:BIT:{A<x>|B<x>|C<x>|D<x>}

Function Sets the condition to be satisfied for the bit of the logic state trigger or queries the current setting.

Syntax `:TRIGger:LOGic:STATe:BIT:{A<x>|B<x>|C<x>|D<x>}{DONTcare|HIGH|LOW}`
`:TRIGger:LOGic:STATe:BIT:{A<x>|B<x>|C<x>|D<x>}?<x> = 0 to 7`

Example `:TRIGGER:LOGIC:STATE:BIT:A0 DONTCARE`
`:TRIGGER:LOGIC:STATE:BIT:A0?`
`-> :TRIGGER:LOGIC:STATE:BIT:A0 DONTCARE`

Description On 16-bit models, you can only select `{A<x>|C<x>}`.

:TRIGger:LOGic:STATe:BIT:CLEar

Function Clears the entire condition to be satisfied for the bit of the logic state trigger (set to don't care) or queries the current setting.

Syntax `:TRIGger:LOGic:STATe:BIT:CLEar`

Example `:TRIGGER:LOGIC:STATE:BIT:CLEAR`

:TRIGger:LOGic:STATe:BIT:LOGic

Function Sets the logic of the logic state trigger or queries the current setting.

Syntax `:TRIGger:LOGic:STATe:BIT:LOGic {AND|OR}`
`:TRIGger:LOGic:STATe:BIT:LOGic?`

Example `:TRIGGER:LOGIC:STATE:BIT:LOGIC AND`
`:TRIGGER:LOGIC:STATE:BIT:LOGIC?`
`-> :TRIGGER:LOGIC:STATE:BIT:LOGIC AND`

5.30 TRIGger Group

:TRIGger:LOGic:STATe:GROup<x>?

Function Queries all settings related to the group of the logic state trigger.

Syntax :TRIGger:LOGic:STATe:GROup<x>?
<x> = 1 to 5

:TRIGger:LOGic:STATe:GROup<x>:CLEar

Function Clears the entire condition to be satisfied for the group of the logic state trigger (set to don't care) or queries the current setting.

Syntax :TRIGger:LOGic:STATe:GROup<x>:CLEar
<x> = 1 to 5

Example :TRIGGER:LOGIC:STATE:GROUP1:CLEAR

:TRIGger:LOGic:STATe:GROup<x>:CONDition

Function Sets the determination condition for the group of the logic state trigger or queries the current setting.

Syntax :TRIGger:LOGic:STATe:GROup<x>:
CONDition {DONTcare|TRUE}
:TRIGger:LOGic:STATe:GROup<x>:
CONDition?
<x> = 1 to 5

Example :TRIGGER:LOGIC:STATE:GROUP1:
CONDITION DONTCARE
:TRIGGER:LOGIC:STATE:GROUP1:
CONDITION? -> :TRIGGER:LOGIC:STATE:
GROUP1:CONDITION DONTCARE

:TRIGger:LOGic:STATe:GROup<x>:HEXA

Function Sets the condition to be satisfied for the group of the logic state trigger in hexadecimal notation.

Syntax :TRIGger:LOGic:STATe:GROup<x>:
HEXA {<String>}
<x> = 1 to 5
<String> = Up to 8 characters by combining '0' to 'F' and 'X'

Example :TRIGGER:LOGIC:STATE:GROUP1:
HEXA "1A3F24CD"

Description If the number of bit mappings specified with :LOGic:GROup<x>:MAPPING is too large, the lower bits are set to X. If the number is too small, the top bits are set.

:TRIGger:LOGic:STATe:GROup<x>:PATtern

Function Sets the condition to be satisfied for the group of the logic state trigger in binary notation or queries the current setting.

Syntax :TRIGger:LOGic:STATe:GROup<x>:
PATtern {<String>}
:TRIGger:LOGic:STATe:GROup<x>:PATtern?
<x> = 1 to 5
<String> = Up to 32 characters by combining '0', '1', and 'X'

Example :TRIGGER:LOGIC:STATE:GROUP1:
PATTERN "111100001111000011110000
11110000"
:TRIGGER:LOGIC:STATE:GROUP1:
PATTERN? -> :TRIGGER:LOGIC:STATE:
GROUP1:PATTERN "11110000111100001111000
011110000"

:TRIGger:LOGic:STATe:GROup<x>:SYMBol

Function Sets the symbol item for each group of the logic state trigger.

Syntax :TRIGger:LOGic:STATe:GROup<x>:
SYMBol {<string>}
<x> = 1 to 5
<string> = 16 characters or fewer

Example :TRIGGER:LOGIC:STATE:GROUP1:
SYMBOL "TEST"

:TRIGger:LOGic:STATe:TYPE

Function Sets the setup type of the logic state trigger or queries the current setting.

Syntax :TRIGger:LOGic:STATe:TYPE {BIT|GROUP}
:TRIGger:LOGic:STATe:TYPE?

Example :TRIGGER:LOGIC:STATE:TYPE BIT
:TRIGGER:LOGIC:STATE:TYPE? -> :TRIGGER:
LOGIC:STATE:TYPE BIT

:TRIGger:LOGic:WIDTh?

Function Queries all settings related to the logic pulse width trigger.

Syntax :TRIGger:LOGic:WIDTh?

:TRIGger:LOGic:WIDTh:MODE

Function Sets the determination mode of the logic pulse width trigger or queries the current setting.

Syntax :TRIGger:LOGic:WIDTh:MODE {BETWEEN|IN|
NOTBetween|OUT|TIMEout}
:TRIGger:LOGic:WIDTh:MODE?

Example :TRIGGER:LOGIC:WIDTH:MODE BETWEEN
:TRIGGER:LOGIC:WIDTH:MODE? -> :TRIGGER:
LOGIC:WIDTH:MODE BETWEEN

:TRIGger:LOGic:WIDTh:POLarity

Function Sets the polarity of the logic pulse width trigger or queries the current setting.

Syntax :TRIGger:LOGic:WIDTh:POLarity {FALSE|NEGative|POSitive|TRUE}
:TRIGger:LOGic:WIDTh:POLarity?

Example :TRIGGER:LOGIC:WIDTH:POLARITY FALSE
:TRIGGER:LOGIC:WIDTH:POLARITY?
-> :TRIGGER:LOGIC:WIDTH:POLARITY FALSE

Description • {FALSE|TRUE} is valid when :TRIGger:TYPE LPState.
• {NEGative|POSitive} is valid if :TRIGger:TYPE LPULse.

:TRIGger:LOGic:WIDTh:SOURce

Function Sets the trigger source of the logic pulse width trigger or queries the current setting.

Syntax :TRIGger:LOGic:WIDTh:SOURce {A<x>|B<x>|C<x>|D<x>}
:TRIGger:LOGic:WIDTh:SOURce?
<x> = 0 to 7

Example :TRIGGER:LOGIC:WIDTH:SOURCE A0
:TRIGGER:LOGIC:WIDTH:SOURCE?
-> :TRIGGER:LOGIC:WIDTH:SOURCE A0

Description On 16-bit models, you can only select {A<x>|C<x>}.

:TRIGger:LOGic:WIDTh:TIME<x>

Function Sets the logic pulse width of the pulse width trigger or queries the current setting.

Syntax :TRIGger:LOGic:WIDTh:TIME<x> {<Time>}
:TRIGger:LOGic:WIDTh:TIME<x>?
<x> = 1 or 2
<Time> = 1 ns to 10 s in 500-ps steps

Example :TRIGGER:LOGIC:WIDTH:TIME1 1S
:TRIGGER:LOGIC:WIDTH:TIME1?
-> :TRIGGER:LOGIC:WIDTH:TIME1 1.000E+00

Description TIME2 is valid when :TRIGger:WIDTh:MODE BETWEEN|NOTBetween.

:TRIGger:MODE

Function Sets the trigger mode or queries the current setting.

Syntax :TRIGger:MODE {ALEVel|AUTO|NORMal|NSingle}
:TRIGger:MODE?

Example :TRIGGER:MODE ALEVEL
:TRIGGER:MODE? -> :TRIGGER:MODE ALEVEL

:TRIGger:POSition

Function Sets the trigger position or queries the current setting.

Syntax :TRIGger:POSition {<NRf>}
:TRIGger:POSition?
<NRf> = 0 to 100 (%)

Example :TRIGGER:POSITION 10
:TRIGGER:POSITION?
-> :TRIGGER:POSITION 10

:TRIGger:SCount (Single(N) Count)

Function Sets the number of times the trigger is to be activated when the trigger mode is Single(N) or queries the current setting.

Syntax :TRIGger:SCount {<NRf>}
:TRIGger:SCount?
<NRf> = See the DL6000/DLM6000 User's Manual.

Example :TRIGGER:SCOUNT 1
:TRIGGER:SCOUNT? -> :TRIGGER:SCOUNT 1

:TRIGger:SOURce?

Function Queries all settings related to the trigger source.

Syntax :TRIGger:SOURce?

:TRIGger:SOURce:CHANnel<x>?

Function Queries all settings related to the channel of the trigger source.

Syntax :TRIGger:SOURce:CHANnel<x>?
<x> = 1 to 4

:TRIGger:SOURce:CHANnel<x>:COUpling

Function Sets the trigger coupling of the channel or queries the current setting.

Syntax :TRIGger:SOURce:CHANnel<x>:
COUpling {AC|DC}
:TRIGger:SOURce:CHANnel<x>:COUpling?
<x> = 1 to 4

Example :TRIGGER:SOURCE:CHANNEL1:COUPLING AC
:TRIGGER:SOURCE:CHANNEL1:COUPLING?
-> :TRIGGER:SOURCE:CHANNEL1:COUPLING DC

:TRIGger:SOURce:CHANnel<x>:**HFRejection (HighFrequencyREJECTION)**

Function Sets the low pass filter (HF rejection) of the channel or queries the current setting.

Syntax :TRIGger:SOURce:CHANnel<x>:
HFRejection {<Frequency>|OFF}
:TRIGger:SOURce:CHANnel<x>:HFRejection?
<x> = 1 to 4
<Frequency> = 20MHz or 15kHz

Example :TRIGGER:SOURCE:CHANNEL1:
HFREJECTION OFF
:TRIGGER:SOURCE:CHANNEL1:HFREJECTION?
-> :TRIGGER:SOURCE:CHANNEL1:
HFREJECTION OFF

5.30 TRIGger Group

:TRIGger:SOURce:CHANnel<x>:

HYSTeresis

Function Sets the hysteresis of the channel or queries the current setting.

Syntax :TRIGger:SOURce:CHANnel<x>:
HYSTeresis {HIGH|LOW}
:TRIGger:SOURce:CHANnel<x>:HYSTeresis?
<x> = 1 to 4

Example :TRIGGER:SOURCE:CHANNEL1:
HYSTERESIS HIGH
:TRIGGER:SOURCE:CHANNEL1:HYSTERESIS?
-> :TRIGGER:SOURCE:CHANNEL1:
HYSTERESIS HIGH

:TRIGger:SOURce:CHANnel<x>:LEVel

Function Sets the trigger level of the channel or queries the current setting.

Syntax :TRIGger:SOURce:CHANnel<x>:
LEVel {<Voltage>|<Current>}
:TRIGger:SOURce:CHANnel<x>:LEVel?
<x> = 1 to 4
<Voltage> and <Current> = See the DL6000/
DLM6000 User's Manual.

Example :TRIGGER:SOURCE:CHANNEL1:LEVEL 1V
:TRIGGER:SOURCE:CHANNEL1:LEVEL?
-> :TRIGGER:SOURCE:CHANNEL1:
LEVEL 1.000E+00

:TRIGger:SOURce:CHANnel<x>:STATe

Function Sets the condition to be satisfied of the channel or queries the current setting.

Syntax :TRIGger:SOURce:CHANnel<x>:
STATe {DONTcare|HIGH|IN|LOW|OUT}
:TRIGger:SOURce:CHANnel<x>:STATe?
<x> = 1 to 4

Example :TRIGGER:SOURCE:CHANNEL1:STATE HIGH
:TRIGGER:SOURCE:CHANNEL1:STATE?
-> :TRIGGER:SOURCE:CHANNEL1:STATE HIGH

Description • This command is valid when :TRIGger:TYPE
EQUalify|I2CBus|PQUalify|PState|
SPATtern|STATe.
• {HIGH|LOW} is valid when :TRIGger:TYPE
I2CBus|SPATtern.
• {IN|OUT} is valid when :TRIGger:TYPE
EQUalify|PQUalify|PState|STATe and
:TRIGger:SOURce:CHANnel<x>:WINDow ON.
{HIGH|LOW} is valid when :TRIGger:TYPE
EQUalify|PQUalify|PState|STATe and
:TRIGger:SOURce:CHANnel<x>:WINDow OFF.

:TRIGger:SOURce:CHANnel<x>:WIDTh

Function Sets the window trigger width of the channel or queries the current setting.

Syntax :TRIGger:SOURce:CHANnel<x>:
WIDTh {<Voltage>|<Current>}
:TRIGger:SOURce:CHANnel<x>:WIDTh?
<x> = 1 to 4
<Voltage> and <Current> = See the DL6000/
DLM6000 User's Manual.

Example :TRIGGER:SOURCE:CHANNEL1:WIDTH 1V
:TRIGGER:SOURCE:CHANNEL1:WIDTH?
-> :TRIGGER:SOURCE:CHANNEL1:
WIDTH 1.000E+00

Description This command is valid when :TRIGger:SOURce:
CHANnel<x>:WINDow ON.

:TRIGger:SOURce:CHANnel<x>:WINDow

Function Turns ON/OFF the window of the channel or queries the current setting.

Syntax :TRIGger:SOURce:CHANnel<x>:
WINDow {<Boolean>}
:TRIGger:SOURce:CHANnel<x>:WINDow?
<x> = 1 to 4

Example :TRIGGER:SOURCE:CHANNEL1:WINDOW ON
:TRIGGER:SOURCE:CHANNEL1:WINDOW?
-> :TRIGGER:SOURCE:CHANNEL1:WINDOW 1

:TRIGger:SOURce:EXTErnal?

Function Queries all settings related to the external trigger.

Syntax :TRIGger:SOURce:EXTErnal?

:TRIGger:SOURce:EXTErnal:LEVel

Function Sets the trigger level of the external trigger or queries the current setting.

Syntax :TRIGger:SOURce:EXTErnal:
LEVel {<Voltage>|<Current>}
:TRIGger:SOURce:EXTErnal:LEVel?
<x> = 1 to 4
<Voltage> and <Current> = See the DL6000/
DLM6000 User's Manual.

Example :TRIGGER:SOURCE:EXTERNAL:LEVEL 1V
:TRIGGER:SOURCE:EXTERNAL:LEVEL?
-> :TRIGGER:SOURCE:EXTERNAL:
LEVEL 1.000E+00

Description This command is valid when :TRIGger:TYPE
EDGE|EQUalify|PQUalify|PULSe.

:TRIGger:SOURce:EXtErnal:PROBE

Function Sets the probe attenuation of the external trigger or queries the current setting.

Syntax :TRIGger:SOURce:EXtErnal:PROBe {<NRf>}
:TRIGger:SOURce:EXtErnal:PROBe?
<NRf> = 1,10

Example :TRIGGER:SOURCE:EXTERNAL:PROBE 1
:TRIGGER:SOURCE:EXTERNAL:PROBE?
-> :TRIGGER:SOURCE:EXTERNAL:PROBE 1

Description This command is valid when :TRIGger:TYPE
EDGE|EQQualify|PQQualify|PULSe.

:TRIGger:SOURce:LOGic

Function Sets the trigger source logic or queries the current setting.

Syntax :TRIGger:SOURce:LOGic {AND|OR}
:TRIGger:SOURce:LOGic?

Example :TRIGGER:SOURCE:LOGIC AND
:TRIGGER:SOURCE:LOGIC? -> :TRIGGER:
SOURCE:LOGIC AND

Description This command is valid when :TRIGger:TYPE
EQQualify|I2Cbus|PQQualify|PState|
SPATtern|STATE.

:TRIGger:TYPE

Function Sets the trigger type or queries the current setting.

Syntax :TRIGger:TYPE {CANBus|EDGE|EICYcle|
EIDelay|EISequence|EOR|EQQualify|
I2Cbus|LINbus|LI2Cbus|
LLINbus|LSPATtern|LSPIbus|LPState|
LPULse|LQQualify|LState|LUARt|
PQQualify|PState|PULSe|SPATtern|
SPIbus|STATE|TV|UART}
:TRIGger:TYPE?

Example :TRIGGER:TYPE CANBUS:TRIGGER:TYPE?
-> :TRIGGER:TYPE CANBUS

Description {LI2Cbus|LLINbus|LSPATtern|LSPIbus|LPState|
LPULse|LQQualify|LState|LUARt} are only available
on the DLM6000.

:TRIGger:WIDTh?

Function Queries all settings related to the pulse width trigger.

Syntax :TRIGger:WIDTh?

:TRIGger:WIDTh:MODE

Function Sets the determination mode of the pulse width trigger or queries the current setting.

Syntax :TRIGger:WIDTh:MODE {BETWeen|IN|
NOTBetween|OUT|TIMEout}
:TRIGger:WIDTh:MODE?

Example :TRIGGER:WIDTH:MODE BETWEEN
:TRIGGER:WIDTH:MODE? -> :TRIGGER:WIDTH:
MODE BETWEEN

:TRIGger:WIDTh:POLarity

Function Sets the polarity of the pulse width trigger or queries the current setting.

Syntax :TRIGger:WIDTh:POLarity {FALSE|IN|
NEGative|OUT|POSitive|TRUE}
:TRIGger:WIDTh:POLarity?

Example :TRIGGER:WIDTH:POLARITY POSITIVE
:TRIGGER:WIDTH:POLARITY? -> :TRIGGER:
WIDTH:POLARITY POSITIVE

Description • {IN|OUT} is valid when :TRIGger:TYPE
PQQualify|PULSe and :TRIGger:SOURce:
CHANnel<x>:WINDow ON. {HIGH|LOW} is valid
when :TRIGger:TYPE PQQualify|PULSe and
:TRIGger:SOURce:CHANnel<x>:WINDow OFF.
• {FALSE|TRUE} is valid when :TRIGger:TYPE
PState.

:TRIGger:WIDTh:SOURce

Function Sets the trigger source of the pulse width trigger or queries the current setting.

Syntax :TRIGger:WIDTh:SOURce {<NRf>|EXtErnal}
:TRIGger:WIDTh:SOURce?
<NRf> = 1 to 4

Example :TRIGGER:WIDTH:SOURCE EXTERNAL
:TRIGGER:WIDTH:SOURCE? -> :TRIGGER:
WIDTH:SOURCE EXTERNAL

Description This command is valid when :TRIGger:TYPE
PQQualify|PULSe.

:TRIGger:WIDTh:TIME<x>

Function Sets the pulse width of the pulse width trigger or queries the current setting.

Syntax :TRIGger:WIDTh:TIME<x> {<Time>}
:TRIGger:WIDTh:TIME<x>?

<x> = 1 or 2

<Time> = 1 ns to 10 s in 500-ps steps

Example :TRIGGER:WIDTH:TIME1 1S
:TRIGGER:WIDTH:TIME1? -> :TRIGGER:
WIDTH:TIME1 1.000E+00

Description TIME2 is valid when :TRIGger:WIDTh:MODE
BETWeen|NOTBetween.

5.31 WAVEform Group

The commands in this group deal with acquired waveform data. There are no front panel keys that correspond to the commands in this group.

:WAVEform?

Function Queries all information about the waveform data.
Syntax :WAVEform?
Example :WAVEFORM? -> :WAVEFORM:TRACE 1;
RECORD 0;START 0;END 6249999;
FORMAT WORD;BYTEORDER LSBFIRST

:WAVEform:BITS?

Function Queries the bit length of the waveform data specified by ":WAVEform:TRACE".
Syntax :WAVEform:BITS?
Example :WAVEFORM:BITS? -> :WAVEFORM:BITS 16

:WAVEform:BYTEorder

Function Sets the transmission order when using word format of two bytes or more or queries the current setting.
Syntax :WAVEform:BYTEorder {LSBFirst|MSBFirst}
:WAVEform:BYTEorder?
Example :WAVEFORM:BYTEORDER LSBFIRST
:WAVEFORM:BYTEORDER? -> :WAVEFORM:
BYTEORDER LSBFIRST

:WAVEform:END

Function Sets the last data point of the waveform specified by :WAVEform:TRACE or queries the current setting.
Syntax :WAVEform:END {<NRf>}
:WAVEform:END?
<NRf> = 0 to 6,249,999
Example :WAVEFORM:END 12499
:WAVEFORM:END? -> :WAVEFORM:END 12499
Description The total number of data points can be queried using :WAVEform:LENGTH?.

:WAVEform:FORMat

Function Sets the format of the data to be transmitted or queries the current setting.
Syntax :WAVEform:FORMat {ASCIi|BYTE|DWord|
RBYTe|WORD}
:WAVEform:FORMat?
Example :WAVEFORM:FORMAT ASCII
:WAVEFORM:FORMAT? ->
:WAVEFORM:FORMAT ASCII
Description • For details on the differences in the format setting, see the description of :WAVEform:SEND?.
• {DWord} is only available on the DLM6000.
• {DWord} is invalid if not :WAVEform:TRACE LGRoup<x>.
• {RBYTe} is invalid if :WAVEform:TRACE LGRoup<x>.

:WAVEform:LENGth?

Function Queries the total number of points of the waveform specified by ":WAVEform:TRACE".
Syntax :WAVEform:LENGth?
Example :WAVEFORM:LENGTH?
-> :WAVEFORM:LENGTH 12500

:WAVEform:OFFSet?

Function Queries the offset value when converting the waveform data specified by :WAVEform:TRACE to physical values.
Syntax :WAVEform:OFFSet?
Example :WAVEFORM:OFFSET? -> 0.000E+00
Description • The offset value is used when converting the <Block data> that is output using :WAVEform:SEND? to physical values.
• When :SYSTEM:OCANcel is ON, 0 is returned.
• On the DLM6000, when you specify :WAVEform:TRACE LGRoup<x>, zero is returned.

:WAVEform:POSition?

Function Queries the vertical axis position used for converting to voltage when RBYTe is specified with: WAVEform:FORMat.
Syntax :WAVEform:POSition?
Example :WAVEFORM:POSITION? -> :WAVEFORM:
POSITION 128

:WAVEform:RANGe?

Function Queries the range value when converting the waveform data specified by :WAVEform:TRACE to physical values.
Syntax :WAVEform:RANGe?
Example :WAVEform:RANGe? -> 5.000E+00
Description The range value is used when converting the <Block data> that is output using :WAVEform:SEND? to physical values.

:WAVEform:RECORD

Function Sets the target record number for the commands in the WAVEform group or queries the current setting.

Syntax :WAVEform:RECORD
{AVERage|MINimum|<NRf>}
:WAVEform:RECORD?
<NRf> = 0 to -1999

Example :WAVEFORM:RECORD 0
:WAVEFORM:RECORD? -> :WAVEFORM:RECORD 0

Description • If "AVERage" is specified, the commands in the WAVEform group are applied to the average value of the history waveform. The record numbers to be averaged are set using the ":HISTory[:CURRent]:DISPlay" command. In addition, the highlight display mode must be set to "AVERage." Set the highlight display mode using the ":HISTory[:CURRent]:MODE" command.

- Specifying "MINimum" sets the record to the minimum record number. The selectable record number varies depending on the model and acquisition setting. For details, See the DLM6000/ DLM6000 User's Manual.

:WAVEform:RECORD? MINimum

Function Queries the minimum record number of the history of the target channel.

Syntax :WAVEform:RECORD? MINimum

Example :WAVEFORM:RECORD? MINimum -> :WAVEFORM:RECORD -1999

:WAVEform:SEND?

Function Queries the waveform data specified by ":WAVEform:TRACe".

Syntax :WAVEform:SEND? [{<NRf>}]
<NRf> = 1 to 2000
Varies depending on the record length setting.

Example :WAVEFORM:SEND? -> #8 (number of bytes, 8 digits) (data sequence)
or <NRf>,<NRf>,...

Description • The output format of :WAVEform:SEND? varies depending on the :WAVEform:FORMAt setting.

- (1) When set to ASCII
 - When WAVEform:TRACe is not set to a logic group, values are returned in the following format: <Voltage>, <Voltage>, ..., <Voltage>.
 - On the DLM6000, when WAVEform:TRACe is set to a logic group, values are returned in the following format: <NR1>, <NR1>, ..., <NR1>. In <NR1>, the logic bit pattern is expressed using a decimal value.
- (2) When set to BYTE, WORD, or DWORd

Returned in the <Block data> format.

You can convert the value using the following equation.

$$\text{Voltage (computed value)} = (\text{range} \times \text{data} / \text{divisions}) + \text{offset}$$
 - * BYTE: Division = 12.5 (1 for the logic group)
 - * WORD: Division = 3200 (1 for the logic group)
 - * DWORd: Division = 1 (DWORd is only valid for logic groups on the DLM6000.)

If the number of bit mappings specified with :LOGic:GROup<x>:MAPPING is too large, the lower bits are output according to the FORMAt.
- (3) When set to RBYTE

Returned in the <Block data> format.

You can convert the value using the following equation.

$$\text{Voltage (computed value)} = (\text{range} \times (\text{data} - \text{Position}) / \text{divisions}) + \text{offset}$$

Divisions = 12.5

Position = Return value of ":WAVEform:POSition?".

 - <NRf> can be omitted. If <NRf> is attached, waveform data is queried <NRf> times in order from the record number specified by :WAVEform:RECORD - <NRf> + 1.

:WAVEform:SIGN?

Function Queries the existence of a sign when querying the waveform data specified by :WAVEform:TRACe using binary data.

Syntax :WAVEform:SIGN?

Example :WAVEFORM:SIGN? -> :WAVEFORM:SIGN 1

Description Returns 0 if :WAVEform:TRACe LGRoup<x>.

5.31 WAVEform Group

:WAVEform:SRATE? (Sample RATE)

Function Queries the sample rate of the record specified by :
WAVEform:RECORD.

Syntax :WAVEform:SRATE?

Example :WAVEFORM:SRATE?
-> :WAVEFORM:SRATE 1.25E+09

:WAVEform:START

Function Sets the first data point of the waveform specified by :
WAVEform:TRACE or queries the current setting.

Syntax :WAVEform:START {<NRf>}

:WAVEform:START?

<NRf> = 0 to 6,249,999 (0 to 2,499,999 on 2.5 MW
memory models)

Example :WAVEFORM:START 0
:WAVEFORM:START? -> :WAVEFORM:START 0

:WAVEform:TRACE

Function Sets the target waveform or queries the current
setting.

Syntax :WAVEform:TRACE {<NRf>|LGROUP<x>|

MATH<x>|REFERENCE<x>}

:WAVEform:TRACE?

<NRf> = 1 to 4

<x> of LGROUP<x> = 1 to 5

<x> of MATH<x> = 1 to 8

<x> of REFERENCE<x> = 1 to 4

Example :WAVEFORM:TRACE 1
:WAVEFORM:TRACE? -> :WAVEFORM:TRACE 1

Description{LGROUP<x>} is only available on the DLM6000.

:WAVEform:TRIGGER?

Function Queries the trigger position of the record specified by
:WAVEform:RECORD.

Syntax :WAVEform:TRIGGER?

Example :WAVEFORM:TRIGGER?
-> :WAVEFORM:TRIGGER 6250

Description Queries the number of points from the first point of
the record length to the trigger position.

:WAVEform:TYPE?

Function Queries the acquisition mode of the waveform
specified by :WAVEform:TRACE.

Syntax :WAVEform:TYPE?

Example :WAVEFORM:TYPE?
-> :WAVEFORM:TYPE NORMAL

5.32 ZOOM Group

:ZOOM?

Function Queries all settings related to the waveform zoom.
Syntax :ZOOM?

:ZOOM:ALLocation<x>?

Function Queries all settings related to the zoom source waveform.
Syntax :ZOOM:ALLocation<x>?
<x> = 1 or 2

:ZOOM:ALLocation<x>:ALLon

Function Sets all waveforms to be zoomed.
Syntax :ZOOM:ALLocation<x>:ALLon
<x> = 1 or 2
Example :ZOOM:ALLOCATION1:ALLON

:ZOOM:ALLocation<x>:TRACe<x>

Function Turns ON/OFF the trace you wish to zoom or queries the current setting.
Syntax :ZOOM:ALLocation<x>:
TRACe<x> {<Boolean>}
:ZOOM:ALLocation<x>:TRACe<x>?
<x> of ALLocation<x> = 1 or 2
<x> of TRACe<x> = 1 to 8
Example :ZOOM:ALLOCATION1:TRACE1 ON
:ZOOM:ALLOCATION1:TRACE1? -> :ZOOM:
ALLOCATION1:TRACE1 1

:ZOOM:FORMat<x>

Function Sets the display format of the zoom waveform or queries the current setting.
Syntax :ZOOM:FORMat<x> {DUAL|MAIN|QUAD|SINGLE|TRIad}
:ZOOM:FORMat<x>?
<x> = 1 or 2
Example :ZOOM:FORMAT1 SINGLE
:ZOOM:FORMAT1? -> :ZOOM:FORMAT1 SINGLE

:ZOOM:HLINKage

Function Turns ON/OFF the horizontal link or queries the current setting.
Syntax :ZOOM:HLINKage {<Boolean>}
:ZOOM:HLINKage?
Example :ZOOM:HLINKAGE ON
:ZOOM:HLINKAGE? -> :ZOOM:HLINKAGE 1

:ZOOM:HORizontal<x>?

Function Queries all settings related to the horizontal zoom.
Syntax :ZOOM:HORizontal<x>?
<x> = 1 or 2

:ZOOM:HORizontal<x>:ASCRoll?

Function Queries all settings related to the auto scroll function.
Syntax :ZOOM:HORizontal<x>:ASCRoll?
<x> = 1 or 2

:ZOOM:HORizontal<x>:ASCRoll:JUMP

Function Moves the zoom center position to the left or right edge of the main screen.
Syntax :ZOOM:HORizontal<x>:ASCRoll:JUMP {LEFT|RIGHT}
<x> = 1 or 2
Example :ZOOM:HORIZONTAL1:ASCROLL:JUMP RIGHT

:ZOOM:HORizontal<x>:ASCRoll:SPEEd

Function Sets the auto scroll speed or queries the current setting.
Syntax :ZOOM:HORizontal<x>:ASCRoll:SPEEd {<Nrf>}
:ZOOM:HORizontal<x>:ASCRoll:SPEEd?
<x> = 1 or 2
<Nrf> = 1, 2, 5, 10, 20, 50
Example :ZOOM:HORIZONTAL1:ASCROLL:SPEED 1
:ZOOM:HORIZONTAL1:ASCROLL:SPEED?
-> :ZOOM:HORIZONTAL1:ASCROLL:SPEED 1

:ZOOM:HORizontal<x>:ASCRoll:START

Function Starts auto scrolling.
Syntax :ZOOM:HORizontal<x>:ASCRoll:START {LEFT|RIGHT}
<x> = 1 or 2
Example :ZOOM:HORIZONTAL1:ASCROLL:START LEFT

:ZOOM:HORizontal<x>:ASCRoll:STOP

Function Stops auto scrolling.
Syntax :ZOOM:HORizontal<x>:ASCRoll:STOP
<x> = 1 or 2
Example :ZOOM:HORIZONTAL1:ASCROLL:STOP

:ZOOM:HORizontal<x>:MAG

Function Sets the horizontal zoom magnification or queries the current setting.
Syntax :ZOOM:HORizontal<x>:MAG {<Nrf>}
:ZOOM:HORizontal<x>:MAG?
<x> = 1 or 2
<Nrf> = See the DL6000/DLM6000 User's Manual.
Example :ZOOM:HORIZONTAL1:MAG 2
:ZOOM:HORIZONTAL1:MAG? -> :ZOOM:
HORIZONTAL1:MAG 2.000E+00

5.32 ZOOM Group

:ZOOM:HORizontal<x>:POSition

Function Sets the horizontal zoom center position or queries the current setting.

Syntax :ZOOM:HORizontal<x>:POSition {<NRf>}
:ZOOM:HORizontal<x>:POSition?
<x> = 1 or 2
<NRf> = -5 to 5 (div)

Example :ZOOM:HORIZONTAL1:POSITION 1
:ZOOM:HORIZONTAL1:POSITION? -> :ZOOM:
HORIZONTAL1:POSITION 1.000E+00

:ZOOM:MODE

Function Sets the zoom waveform display format or queries the current setting.

Syntax :ZOOM:MODE {MAIN|MAIN_Z1|MAIN_Z1_Z2|
MAIN_Z2|Z1|Z1_Z2|Z2}
:ZOOM:MODE?

Example :ZOOM:MODE MAIN_Z1_Z2
:ZOOM:MODE? -> :ZOOM:MODE MAIN_Z1_Z2

:ZOOM:VERTical<x>?

Function Queries all settings related to the vertical zoom.

Syntax :ZOOM:VERTical<x>?
<x> = 1 or 2

:ZOOM:VERTical<x>:MAG

Function Sets the vertical zoom magnification or queries the current setting.

Syntax :ZOOM:VERTical<x>:MAG {<NRf>}
:ZOOM:VERTical<x>:MAG?
<x> = 1 or 2
<NRf> = See the DL6000/DLM6000 User's Manual.

Example :ZOOM:VERTICAL1:MAG 1
:ZOOM:VERTICAL1:MAG? -> :ZOOM:VERTICAL1:
MAG 1.000E+00

:ZOOM:VERTical<x>:POSition

Function Sets the vertical zoom position or queries the current setting.

Syntax :ZOOM:VERTical<x>:POSition {<NRf>}
:ZOOM:VERTical<x>:POSition?
<x> = 1 or 2
<NRf> = -4 to 4 (div)

Example :ZOOM:VERTICAL1:POSITION 1
:ZOOM:VERTICAL1:POSITION? -> :ZOOM:
VERTICAL1:POSITION 1.000E+00

:ZOOM:VERTical<x>:TRACe

Function Sets the trace you wish to display on the vertical zoom screen or queries the current setting.

Syntax :ZOOM:VERTical<x>:TRACe {<NRf>}
:ZOOM:VERTical<x>:TRACe?
<x> = 1 or 2
<NRf> = 1 to 8

Example :ZOOM:VERTICAL1:TRACE 1
:ZOOM:VERTICAL1:TRACE? -> :ZOOM:
VERTICAL1:TRACE 1

:ZOOM:VLInkage

Function Turns ON/OFF the vertical link or queries the current setting.

Syntax :ZOOM:VLInkage {<Boolean>}
:ZOOM:VLInkage?

Example :ZOOM:VLInkAGE ON
:ZOOM:VLInkAGE? -> :ZOOM:VLInkAGE 1

5.33 Common Command Group

The commands in the common group are defined in the USBTMC-USB488 and are independent of the instrument's functions. There are no front panel keys that correspond to the commands in this group.

***CAL? (CALibrate)**

Function Performs calibration and queries the result.

Syntax *CAL?

Example *CAL? -> 0

Description If the calibration terminates normally, 0 is returned. If an error is detected, 1 is returned.

***CLS (CLear Status)**

Function Clears the standard event register, extended event register, and error queue.

Syntax *CLS

Example *CLS

Description • If the *CLS command is located immediately after the program message terminator, the output queue is also cleared.
• For details on the register and queue, see chapter 6.

***ESE (standard Event Status Enable register)**

Function Sets the standard event enable register or queries the current setting.

Syntax *ESE {<Nrf>}

*ESE?

<Nrf> = 0 to 255

Example *ESE 251

*ESE? -> 251

Description • Specify the value as a sum of decimal values of each bit.
• For example, specifying "*ESE 251" will cause the standard enable register to be set to "11111011." In this case, bit 2 of the standard event register is disabled which means that bit 5 (ESB) of the status byte register is not set to 1, even if a "query error" occurs.
• The default value is "*ESE 0" (all bits disabled).
• A query using *ESE? will not clear the contents of the standard event enable register.
• For details on the standard event enable register, see page 6-4.

***ESR? (standard Event Status Register)**

Function Queries the standard event register and clears the register.

Syntax *ESR?

Example *ESR? -> 32

Description • A sum of decimal values of each bit is returned.
• You can check what type of events occurred when an SRQ is generated.
• For example, if a value of "32" is returned, this indicates that the standard event register is set to "00100000." In this case, you can see that the SRQ occurred due to a "command syntax error."
• A query using *ESR? will clear the contents of the standard event register.
• For details on the standard event register, see page 6-4.

***IDN? (IDeNtify)**

Function Queries the instrument model.

Syntax *IDN?

Example *IDN? -> YOKOGAWA,DLM6054,27E100000,F1.10

Description The information is returned in the following form:
<Manufacturer>,<Model>,<Serial No.>,<Firmware version> <Model>
For <Model>, one of the following values is returned: DL6054, DL6104, DL6154, DLM6054, or DLM6104.

***OPC (OPeration Complete)**

Function Sets bit 0 (OPC bit) of the standard event register to 1 upon the completion of the specified overlap command.

Syntax *OPC

Example *OPC

Description • For the description regarding how to synchronize the program using *OPC, see page 4-7.
• The COMMunicate:OPSE command is used to specify the overlap command.
• If *OPC is not the last command of the message, the operation is not guaranteed.

5.33 Common Command Group

***OPC? (Operation Complete)**

Function If *OPC? is transmitted and the specified overlap command is completed, ASCII code 1 is returned.

Syntax *OPC?

Example *OPC? -> 1

Description

- For the description regarding how to synchronize the program using *OPC, see page 4-8.
- The COMMunicate:OPSE command is used to specify the overlap command.
- If *OPC? is not the last command of the message, the operation is not guaranteed.

***OPT? (OPTION)**

Function Queries the installed options.

Syntax *OPT?

Example *OPT? -> CH6.25MW,PRINTER,ETHER,
STORAGE,USERDEFINE,I2C,CAN,LIN,SPI,
UART,PANALYZE,PROBEPower4,LXIHDDEther,
LXIETHER,LOGIC32

Description

- Returns the memory model as well as the presence/absence of the built-in printer, Ethernet, internal storage, user-defined computation, I2C analysis function, CAN analysis function, LIN analysis function, SPI analysis function, UART analysis function, power supply analysis function, rear panel probe power, internal storage + LXI Ethernet, LXI Ethernet, and logic input.
- The "*OPT?" query must be the last query of the program message. An error occurs if there is a query after this query.

***PSC (Power-on Status Clear)**

Function Sets whether or not to clear the registers below at power on or queries the current setting. The register is cleared when the value rounded to an integer is a non-zero value.

- Standard event enable register
- Extended event enable register
- Transition filter

Syntax *PSC {<Nrf>}
*PSC?

<Nrf> = 0 (not clear), non-zero (clear)

Example *PSC 1
*PSC? -> 1

Description For details on the registers, see chapter 6.

***RST (ReSeT)**

Function Initializes the settings.

Syntax *RST

Example *RST

Description Also clears *OPC and *OPC? commands that have been sent earlier.

***SRE (Service Request Enable register)**

Function Sets the service request enable register or queries the current setting.

Syntax *SRE <Nrf>

*SRE?

<Nrf> = 0 to 255

Example *SRE 239

*SRE? -> 239

Description

- Specify the value as a sum of decimal values of each bit.
- For example, specifying "*SRE 239" will cause the service request enable register to be set to "11101111." In this case, bit 4 of the service request enable register is disabled which means that bit 4 (MAV) of the status byte register is not set to 1, even if "the output queue is not empty."
- Bit 6 (MSS) of the status byte register is the MSS bit itself, and therefore, is ignored.
- The default value is "*SRE 0" (all bits disabled).
- A query using *SRE? will not clear the contents of the service request enable register.
- For details on the service request enable register, see page 6-2.

***STB? (STatus Byte)**

Function Queries the status byte register.

Syntax *STB?

Example *STB? -> 4

Description

- The sum of the bits is returned as a decimal value.
- Since the register is read without executing serial polling, bit 6 is a MSS bit not RQS.
- For example, if a value of 4 is returned, this indicates that the status byte register is set to "00000100." In this case, you can see that "the error queue is not empty" (an error occurred).
- A query using *STB? will not clear the contents of the status byte register.
- For details on the status byte register, see page 6-3.

***TST?**

Function Performs a self-test and queries the result. The self test involves internal memory tests.

Syntax *TST?

Example *TST? -> 0

Description If the self-test is successful, 0 is returned. If there is an error, 1 is returned.

***WAI (WAIt)**

Function Holds the subsequent command until the completion of the specified overlap operation.

Syntax *WAI

Example *WAI

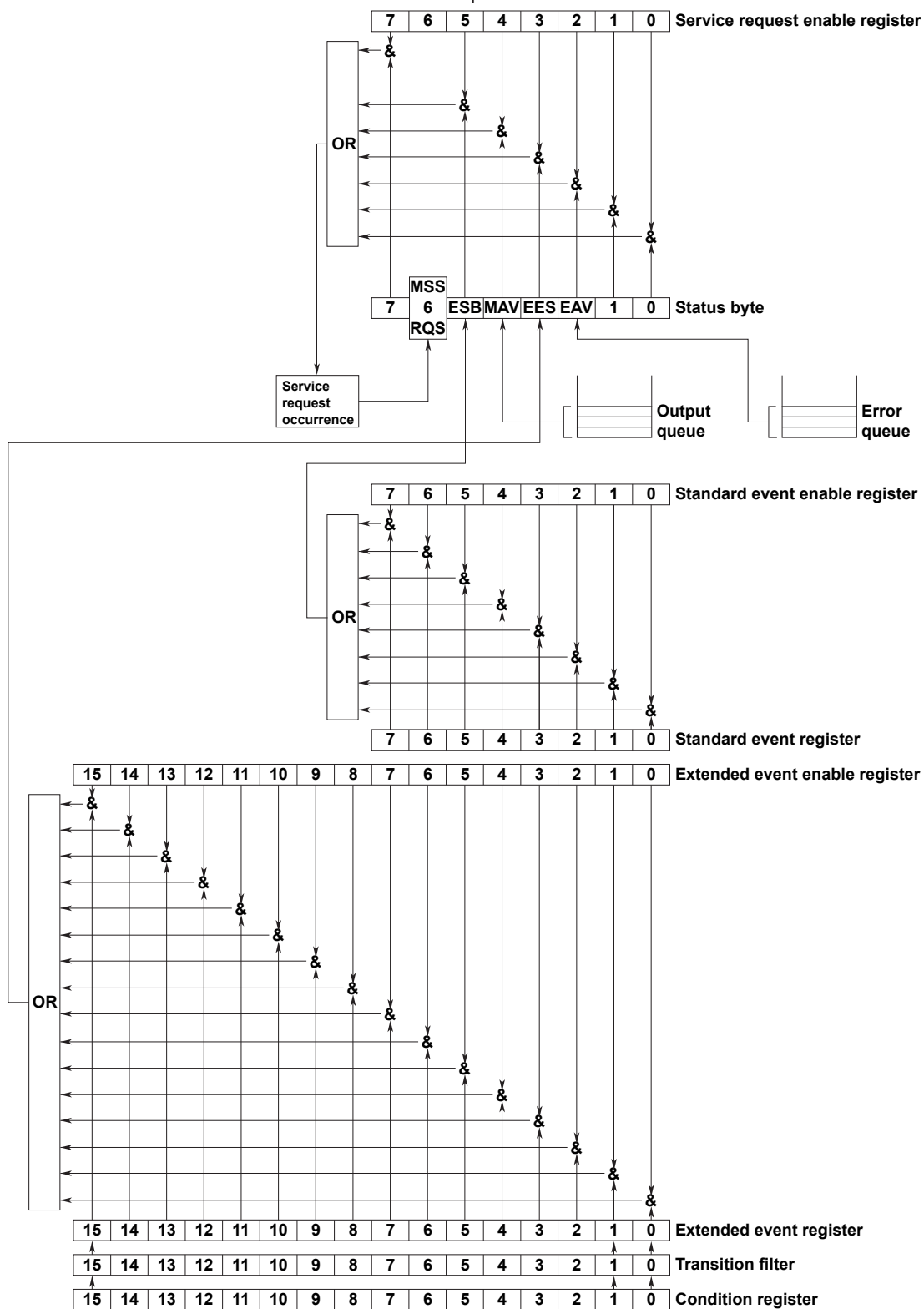
Description • For the description regarding how to synchronize the program using *WAI, see page 4-7.

- The :COMMunicate:OPSE command is used to specify the overlap command.

6.1 Overview of the Status Report

Status Reports

The figure below shows the status report that is read by serial polling. This status report is an extended version of the status report defined in IEEE 488.2-1992



6.1 Overview of the Status Report

Overview of the Registers and Queues

Name	Functions	Writing	Reading
Status byte	–	–	Serial polling (RQS) *STB? (MSS)
Service request enable register	Masks status byte	*SRE	*SRE?
Standard event register	Changes in device status	–	*ESR?
Standard event enable register	Masks standard event register	*ESE	*ESE?
Extended event register	Changes in device status	–	STATus:EESR?
Extended event enable register	Masks extended event register	STATus:EESE	STATus:EESE?
Condition register	Current instrument status	–	STATus:CONDition?
Transition filter	Conditions that change the extended event register	STATus:FILTer<x>	STATus:FILTer<x>?
Output queue	Stores a response message to a query	All query commands	
Error queue	Stores the error number and message	–	STATus:ERRor?

Registers and Queues That Affect the Status Byte

Registers that affect the bits of the status byte are shown below.

Standard event register	Sets bit 5 (ESB) of the status byte to 1 or 0.
Output queue	Sets bit 4 (MAV) of the status byte to 1 or 0.
Extended event register	Sets bit 3 (EES) of the status byte to 1 or 0.
Error queue	Sets bit 2 (EAV) of the status byte to 1 or 0.

Enable Registers

Registers that are used to mask a bit so that the bit will not affect the status byte even when it is set to 1, are shown below.

Status byte	Mask the bits using the service request enable register.
Standard event register	Mask the bits using the standard event enable register.
Extended event register	Mask the bits using the extended event enable register.

Writing/Reading from Registers

The *ESE command is used to set the bits in the standard event register to 1's or 0's.

The *ESE? command is used to query whether the bits in the standard event register are 1's or 0's. For details regarding these commands, see chapter 5.

6.2 Status Byte

Status Byte

	RQS						
7	6	ESB	MAV	EES	EAV	1	0
	MSS						

- **Bits 0, 1, and 7**
Not used (always 0)
- **Bit 2 EAV (Error Available)**
Set to 1 when the error queue is not empty. In other words, this bit is set to 1 when an error occurs. See the page 6-6.
- **Bit 3 EES (Extend Event Summary Bit)**
Set to 0 when the logical product of the extended event register and the corresponding enable register is 1. In other words, this bit is set to 1 when an event takes place inside the instrument. See the page 6-5.
- **Bit 4 MAV (Message Available)**
Set to "1" when the output queue is not empty. In other words, this bit is set to 1 when there are data to be transmitted. See the page 6-6.
- **Bit 5 ESB (Event Summary Bit)**
Set to 0 when the logical product of the standard event register and the corresponding enable register is 1. In other words, this bit is set to 1 when an event takes place inside the instrument. See the page 6-4.
- **Bit 6 RQS(Request Service)/
MSS(Master Status Summary)**
Set to 1 when the logical AND of the status byte excluding Bit 6 and the service request enable register is not 0. In other words, this bit is set to 1 when the instrument is requesting service from the controller.
RQS is set to 1 when the MSS bit changes from 0 to 1, and cleared when serial polling is carried out or when the MSS bit changes to 0.

Bit Masking

To mask a bit in the status byte so that it does not cause an SRQ, set the corresponding bit of the service request enable register to 0.

For example, to mask bit 2 (EAV) so that service is not requested when an error occurs, set bit 2 of the service request enable register to 0. This can be done using the *SRE command. To query whether each bit of the service request enable register is 1 or 0, use *SRE?. For details on the *SRE command, see chapter 5.

Operation of the Status Byte

A service request is issued when bit 6 of the status byte becomes 1. Bit 6 is set to 1 when any of the other bits becomes a 1 (when the corresponding bit of the service request enable register is also set to 1).

For example, if an event occurs and the logical AND of the standard event register and the corresponding enable register becomes a 1, then bit 5 (ESB) is set to 1. In this case, if bit 5 of the service request enable register is 1, bit 6 (MSS) will be set to 1, thus requesting service from the controller.

In addition, you can also check what type of event occurred by reading the contents of the status byte.

Reading from the Status Byte

The following two methods are provided for reading the status byte.

- **Inquiry using the *STB? query**
Making an inquiry using the *STB? query sets bit 6 to MSS. This causes the MSS to be read. After completion of the read-out, none of the bits in the status byte will be cleared.
- **Serial polling**
Execution of a serial polling changes bit 6 to RQS. This causes RQS to be read. After completion of the read-out, only RQS is cleared. It is not possible to read MSS using serial polling.

Clearing the Status Byte

No method is provided for forcibly clearing all the bits in the status byte. The bits that are cleared for each operation are shown below.

- **When a query is made using the *STB? command**
No bits are cleared.
- **When serial polling is executed**
Only the RQS bit is cleared.
- **When a *CLS command is received.**
When the *CLS command is received, the status byte itself is not cleared, but the contents of the standard event register (which affects the bits in the status byte) are cleared. As a result, the corresponding bits in the status byte are cleared, except bit 4 (MAV), since the output queue cannot be emptied by the *CLS command. However, the output queue will also be cleared if the *CLS command is received just after a program message terminator.

6.3 Standard Event Register

Standard Event Register

7	6	5	4	3	2	1	0
PON	URQ	CME	EXE	DDE	QYE	RQC	OPC

- **Bit 7 PON (Power ON)**
Set to 1 when the power is turned ON.
- **Bit 6 URQ (User Request)**
Not used (always 0)
- **Bit 5 CME (Command Error)**
Set to 1 when the command syntax is incorrect.
Example Incorrectly spelled command name; "9" used in octal data.
- **Bit 4 EXE (Execution Error)**
Set to 1 when the command syntax is correct but the command cannot be executed in the current state.
Example Received a command with a parameter outside the range or attempted to output a hard copy while waveform acquisition is in progress.
- **Bit 3 DDE (Device Dependent Error)**
Set to 1 when execution of the command is not possible due to an internal problem in the instrument that is not a command error or an execution error.
- **Bit 2 QYE (Query Error)**
Set to 1 if the output queue is empty or if the data is missing even after a query has been sent.
Example No response data; data is lost due to an overflow in the output queue.
- **Bit 1 RQC (Request Control)**
Not used (always 0)
- **Bit 0 OPC (Operation Complete)**
Set to 1 when the operation designated by the *OPC command (see chapter 5) has been completed.

Bit Masking

To mask a bit in the standard event register so that it does not cause bit 5 (ESB) of the status byte to change, set the corresponding bit in the standard event enable register to 0. Refer to Chapter 4. For example, to mask bit 2 (QYE) so that ESB will not be set to 1, even if a query error occurs, set bit 2 of the standard event enable register to 0. This can be done using the *ESE command. To inquire whether each bit of the standard event enable register is 1 or 0, use the *ESE?. For details on the *ESE command, see chapter 5.

Operation of the Standard Event Register

The standard event register is provided for eight different kinds of event which can occur inside the instrument. Bit 5 (ESB) of the status byte is set to 1 when any of the bits in this register becomes 1 (or when the corresponding bit of the standard event enable register becomes 1).

Example

1. A query error occurs.
2. Bit 2 (QYE) is set to 1.
3. Bit 5 (ESB) of the status byte is set to 1 if bit 2 of the standard event enable register is 1.

It is also possible to check what type of event has occurred inside the instrument by reading the contents of the standard event register.

Reading from the Standard Event Register

The contents of the standard event register can be read by the *ESR command. After the register is read, it is cleared.

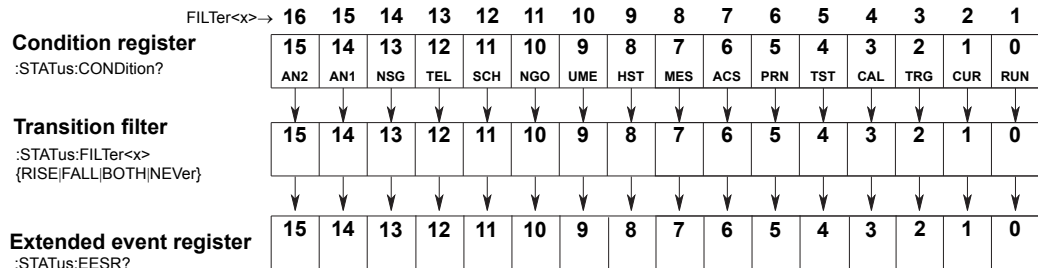
Clearing the Standard Event Register

The standard event register is cleared in the following three cases.

- When the contents of the standard event register are read using the *ESR command.
- When a *CLS command is received.
- When the instrument is power cycled.

6.4 Extended Event Register

Reading the extended event register tells you whether changes in the condition register (reflecting internal conditions) have occurred. A filter can be applied which allows you to decide which events are reported to the extended event register.



The meaning of each bit of the condition register is as follows:

Bit 0	RUN (Running)	Set to 1 while waveform acquisition is in progress.
Bit 1	CUR (Cursor)	Set to 1 during cursor measurement.
Bit 2	TRG (Awaiting trigger)	Set to 1 when waiting for a trigger.
Bit 3	CAL (Calibration)	Set to 1 while calibration is in progress.
Bit 4	TST (Testing)	Set to 1 while self-test is in progress.
Bit 5	PRN (Printing)	Set to 1 while the built-in printer is operating, while data is being output to an external printer (USB/network), or while screen image data is being saved.
Bit 6	ACS (Accessing)	Set to 1 while a storage drive is being accessed.
Bit 7	MES (Measuring)	Set to 1 when automated measurement of waveform parameters is in progress.
Bit 8	HST (History Search)	Set to 1 while history search is in progress.
Bit 9	UME (User Math Executing)	Set to 1 while the user-defined computation is in progress.
Bit 10	NGO (Go/No-go)	Set to 1 while GO/NO-GO search is in progress.
Bit 11	SCH (Search)	Set to 1 while search is in progress.
Bit 12	TEL (Telecom Test)	Set to 1 while the telecom test is in progress.
Bit 13	NSG (N-Single)	Set to 1 while continuous acquisition is in progress when the trigger mode is set to single (N).
Bit 14	AN1 (Analysis1)	Set to 1 while Analysis 1 is in progress.
Bit 15	AN2 (Analysis2)	Set to 1 while Analysis 2 is in progress.

The transition filter parameters detect changes in the specified bit (numerical suffix, 1 to 16) of the condition register in the following manner and overwrite the extended event register.

RISE	The specified bit of the extended event register is set to 1 when the bit of the condition register changes from 1 to 0.
FALL	The specified bit of the extended event register is set to 1 when the bit of the condition register changes from 0 to 1.
BOTH	The bit of the extended event register is set to 1 when the bit of the condition register changes from 0 to 1 or from 1 to 0.
NEVer	Always 0.

6.5 Output Queue and Error Queue

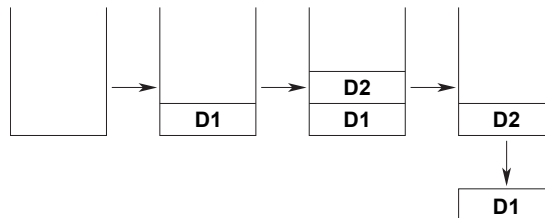
Output Queue

The output queue is provided to store response messages to queries. For example, if you send the `WAVEform:SEND?` command, which requests the output of acquired data, the data is stored in the output queue until it is read.

As shown below, data are stored in order and read from the oldest ones first. The output queue is emptied in the following cases (in addition to when read-out is performed).

- When a new message is received from the controller.
- When a deadlock occurs (see page 5-2).
- When a device clear command (DCL or SDC) is received.
- When the instrument is power cycled.

The output queue cannot be emptied using the `*CLS` command. To see whether the output queue is empty or not, check bit 4 (MAV) of the status byte.



Error Queue

The error queue stores the error No. and message when an error occurs. For example, if the controller sends an incorrect program message, the error number and message "113, "Undefined header"" are stored in the error queue when the error is displayed.

The `STATus:ERRor?` query can be used to read the contents of the error queue. As with the output queue, the messages are read from the oldest ones first.

When the error queue overflows, the last message is replaced by the message "350, "Queue overflow".

The error queue is also cleared for the following cases:

- When a `*CLS` command is received.
- When the instrument is power cycled.

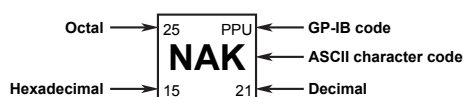
To see whether the error queue is empty or not, check bit 2 (EAV) of the status byte.

Appendix 1 ASCII Character Codes

The following table shows the ASCII character codes.

	0	1	2	3	4	5	6	7
0	0 NUL	20 DEL	40 SP	60 0	100 @	120 P	140 '	160 p
1	1 SOH	21 DC1	41 !	61 1	101 A	121 Q	141 a	161 q
2	2 STX	22 DC2	42 "	62 2	102 B	122 R	142 b	162 r
3	3 ETX	23 DC3	43 #	63 3	103 C	123 S	143 c	163 s
4	4 EOT	24 DC4	44 \$	64 4	104 D	124 T	144 d	164 t
5	5 ENQ	25 NAK	45 %	65 5	105 E	125 U	145 e	165 u
6	6 ACK	26 SYN	46 &	66 6	106 F	126 V	146 f	166 v
7	7 BEL	27 ETB	47 ,	67 7	107 G	127 W	147 g	167 w
8	10 BS	30 CAN	50 (	70 8	110 H	130 X	150 h	170 x
9	11 HT	31 EM	51)	71 9	111 I	131 Y	151 i	171 y
A	12 LF	32 SUB	52 *	72 :	112 J	132 Z	152 j	172 z
B	13 VT	33 ESC	53 +	73 ;	113 K	133 [	153 k	173 {
C	14 FF	34 FS	54 ,	74 <	114 L	134 \ I	154 l	174
D	15 CR	35 GS	55 -	75 =	115 M	135]	155 m	175 }
E	16 SO	36 RS	56 .	76 >	116 N	136 ^	156 n	176 ~
F	17 SI	37 US	57 /	77 ?	117 O	137 _	157 o	177 DEL (RUBOUT)
	Address commands	Universal commands	Listener address		Talker address		Secondary commands	

Example



Appendix 2 Error Messages

This section describes the error messages related to communications.

- The messages can be displayed in English or Japanese on the DL9500/DL9700. However, when the messages are read from a PC or other similar computers, the messages are displayed in English.
 - If servicing is required, contact your nearest YOKOGAWA dealer for repairs.
 - Only error messages related to communications are listed here. For other error messages, see *User's Manual IM 701331-01E*.
- | | | |
|---------------------------------|---------|------------------------|
| • Communication syntax error | 100~199 | } Details given below. |
| • Communication execution error | 200~299 | |
| • Model specific (other) | 300~398 | |
| • Communication query error | 400~499 | |
| • System error (communications) | 399 | |

Error in Communication Command (100-199)

Code	Messages	Corrective Action	Reference Page
102	Syntax error.	Invalid syntax.	Chapter 4, 5
103	Invalid separator.	Use a comma to separate the data.	4-1
104	Data type error.	Write using the correct data form.	4-6 to 4-7
105	GET not allowed.	GET is not supported for responses to interface messages.	3-6
108	Parameter not allowed.	Check the number of data points.	4-6, Chapter 5
109	Missing parameter.	Enter the required data.	4-6, Chapter 5
111	Header separator error.	Use a space to separate the header and data.	4-1
112	Program mnemonic too long.	Check the mnemonic (alphanumerical character string).	Chapter 5
113	Undefined header.	Check the header.	4-4, Chapter 5
114	Header suffix out of range.	Check the header.	4-4, Chapter 5
120	Numeric data error.	A number is required in the <NRf> form.	4-6
123	Exponent too large.	Use a smaller exponent for <NR3> format.	4-6, Chapter 5
124	Too many digits.	The value must be less than equal to 255 digits.	4-6, Chapter 5
128	Numeric data not allowed.	Enter in a format other than <NRf> format.	4-6, Chapter 5
131	Invalid suffix.	Check the unit of the <Voltage>, <Time>, <Frequency>, and <Current>.	4-6
134	Suffix too long.	Check the unit of the <Voltage>, <Time>, <Frequency>, and <Current>.	4-6
138	Suffix not allowed.	No units are allowed other than <Voltage>, <Time>, <Frequency>, and <Current>.	4-6
141	Invalid character data.	Select character data from the selections available in {...}.	4-7, Chapter 5
144	Character data too long.	Check the spelling of the character strings in {...}.	4-7, Chapter 5
148	Character data not allowed.	Write in a data form other than {...}.	4-5, Chapter 5
150	String data error.	Enclose <String> in double quotation or single quotation marks.	4-7
151	Invalid string data.	<String> is too long or contains characters which cannot be used.	4-7, Chapter 5
158	String data not allowed.	Enter in a data format other than <Character string>.	4-6, Chapter 5
161	Invalid block data.	<Block data> is not allowed.	4-7, Chapter 5
168	Block data not allowed.	<Block data> is not allowed.	4-7, Chapter 5
171	Invalid expression.	Equations cannot be used.	Chapter 5
178	Expression data not allowed.	Equations cannot be used.	Chapter 5

Error in Communication Execution (200 to 299)

Code	Messages	Corrective Action	Reference Page
221	Setting conflict.	Check the relevant settings.	Chapter 5
222	Data out of range.	Check the range.	Chapter 5
223	Too much data.	Check the length of the data.	Chapter 5
224	Illegal parameter value.	Check the range.	Chapter 5
241	Hardware missing.	Check the installed options.	–
260	Expression error.	Equations cannot be used.	–

Error in Communication Query (400 to 499)

Code	Messages	Corrective Action	Reference Page
410	Query INTERRUPTED.	Check transmission/reception order.	4-2
420	Query UNTERMINATED.	Check transmission/reception order.	4-2
430	Query DEADLOCKED.	Limit the length of the program message including <PMT> to 4-2 1024 bytes or less.	–
440	Query UNTERMINATED after indefinite response.	Do not specify a query after the *IDN? or *OPT? command.	–

Error in System Operation (399)

Code	Messages	Corrective Action	Reference Page
399	Fatal error in the communication driver.	Maintenance service is required.	–

Warning (50)

Code	Messages	Corrective Action	Reference Page
50	*OPC/? exists in message.	Place the *OPC or *OPC? command at the end of the program message.	–

Other Errors (350)

Code	Messages	Corrective Action	Reference Page
350	Queue overflow.	Read the error queue.	6-6

Note

Code 350 indicates overflow of error queue. This code is returned as a response to the STATUS:ERROR? query; it does not appear on the screen.

Appendix 3 Waveform Parameter Name Table

Name Displayed on the Setup Menu of the DL9500/DL9700 Screen	Name Used by Communication Commands	Name on the DL9500/DL9700 Screen When Displaying Measured Results
Max	MAXimum	Max
Min	MINimum	Min
High	HIGH	High
Low	LOW	Low
P-P	PTOPeak	P-P
Hi-Low	HiLow	Hi-Low
+Over	POVershoot	+Over
-Over	NOVershoot	-Over
Rms	RMS	Rms
Mean	MEAN	Mean
Sdev	SDEViation	Sdev
IntegTY	TYINteg	ITY
C.Rms	CRMS	CRms
C.Mean	CMEan	CMean
C.Sdev	CSDeviation	CSdev
C.IntegTY	TYCInteg	CITY
Freq	FREQuency	Freq
1/Freq	PERFrequency	1/FR
Count	COUNT	Count
Burst	BURSt	Burst
+Width	PWIDth	+Width
-Width	NWIDth	-Width
Period	PERiod	Period
Duty	DUTYcycle	Duty
Rise	RISE	Rise
Fall	FALL	Fall
Delay	DELay	Dly

Appendix 4 Eye Pattern Parameter Name Table

Name Displayed on the Setup Menu of the DL9500/DL9700 Screen	Name Used by Communication Commands	Name on the DL9500/DL9700 Screen When Displaying Measured Results
Crossing %	PCROSSing	Cross%
Eye Height	EHEight	EyeHi
Eye Width	EWIDth	EyeWid
Q Factor	QFACTOR	QFact
Jitter	JITTer	Jitter
Duty Cycle Distraction %	PDUtycycle	DCDTime%
Vtop	VTOP	Vtop
Vbase	VBASE	Vbase
σ top	SDTop	σ top
σ base	SDBase	σ base
Tcrossing1	T1CROSSing	Tcros1
Tcrossing2	T2CROSSing	Tcros2
Vcrossing	VCRossing	Vcros
Ext Rate dB	DBERate	ERdB
Rise	RISE	Rise
Fall	FALL	Fall

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